Maine Educational Assessment

2018 - 2019: equating report

measured progress

2018 - 2019 Maine Educational Assessment

Equating Report

The purpose of this document is to summarize the equating results obtained from Measured Progress for eMPowerME Assessment. Presented in this report are various program summary statistics and specific results related to the equating study.

The results of this report are organized as follows:

1. Aggregate Results
    1. Percentage of Students by Achievement Level Categories
    2. Calibration Report
    3. Equating Item Summary Statistics
    4. Summary of Psychometric QC Activities
2. Grade Subject Results
    1. A/A, B/B, Delta, Test Characteristic Curve, Test Information Function, and Cumulative Scale Score Distribution Plots
    2. Lookup Tables
    3. Cumulative Scale Score Distribution Tables
    4. Rescore Analysis Results
    5. Tabled Delta Analysis Results
    6. Tabled B/B Analysis Results
    7. Final Item Parameters
    8. Decision Accuracy and Consistency (DAC)
    9. Fit Plots of Watchlist Items

The final results of this equating will be included as part of the 2018 - 2019 eMPowerME Assessment Technical Manual. If requested, Measured Progress will distribute and/or present this report at the next MEA TAC.

Section 1.1

Percentage of Students by Achievement Level Categories

Table 1.1.1

Percentage of Students by Achievement Level Categories

English Language Arts

Grade	Year	Count	WBSE	BSE	AtSE	AbSE	AtSE/AbSE	Delta	Ave. SS
3	2019	12342	21	28	28	23	51	3.4	359.5
	2018	12832	23	29	29	18	48	-0.9	358.3
	2017	12897	23	28	27	21	49	0.7	358.2
	2016	13096	24	28	27	20	48		358.2
4	2019	12871	19	25	33	23	56	2.2	462.1
	2018	12873	23	23	33	22	54	2.8	460.4
	2017	13221	23	25	31	20	51	-1.0	460.3
	2016	12876	25	23	32	21	52		459.5
5	2019	12984	22	25	39	14	53	-1.9	560.1
	2018	13214	22	23	38	17	55	0.0	560.6
	2017	13004	22	23	37	19	55	3.3	561.0
	2016	13111	23	25	35	17	52		559.7
6	2019	13187	13	31	38	19	56	6.1	661.1
	2018	12939	18	32	34	16	50	0.5	659.1
	2017	13171	17	33	34	16	50	3.3	658.9
	2016	13006	17	37	32	15	46		658.3
7	2019	12934	16	24	40	20	60	7.8	761.5
	2018	13168	18	30	36	16	52	-0.3	760.2
	2017	13208	15	33	36	16	52	4.8	760.4
	2016	12805	19	34	34	14	47		758.0
8	2019	13093	12	29	44	15	58	0.2	862.1
	2018	13063	13	29	43	15	58	6.6	861.7
	2017	12877	16	33	38	13	52	3.2	859.8
	2016	12876	15	36	37	12	48		858.9

Table 1.1.2

Percentage of Students by Achievement Level Categories

Mathematics

Grade	Year	Count	WBSE	BSE	AtSE	AbSE	AtSE/AbSE	Delta	Ave. SS
3	2019	12396	25	32	35	8	43	-2.5	356.0
	2018	12867	25	29	36	9	46	-0.1	356.6
	2017	12953	23	31	36	10	46	-2.6	357.2
	2016	13143	23	29	38	10	48		357.3
4	2019	12918	21	38	30	10	40	0.4	456.1
	2018	12908	24	36	29	11	40	-3.5	455.9
	2017	13254	18	39	33	11	43	3.7	456.5
	2016	12931	20	40	28	11	40		454.8
5	2019	13019	22	45	23	10	33	-0.7	553.1
	2018	13246	22	45	24	10	33	-2.1	552.8
	2017	13065	21	44	25	10	36	0.3	553.3
	2016	13140	21	44	26	9	35		552.0
6	2019	13212	35	36	21	8	30	-1.3	650.9
	2018	12963	32	37	21	10	31	-1.5	651.5
	2017	13236	29	38	23	10	33	-0.4	652.4
	2016	13050	31	36	23	10	33		652.2
7	2019	12953	30	36	27	7	34	-1.3	752.0
	2018	13205	28	37	26	9	35	-5.8	753.6
	2017	13266	27	32	34	7	41	1.3	754.4
	2016	12826	31	29	31	9	40		752.9
8	2019	13106	30	34	25	11	36	-2.5	854.0
	2018	13105	29	33	28	11	38	3.5	853.6
	2017	12929	31	34	26	9	35	-0.2	853.6
	2016	12898	34	31	25	10	35		853.2

Section 1.2

Calibration Report

Calibration Report—Executive Summary

PARSCALE 4.1 was used for all analyses. All command files were set up in a way that all general settings were identical to last year. For example, the calibration statement reads:

CAL GRADED,LOGISTIC,CYCLE=(150,1,1,1,1),TPRIOR,SPRIOR,GPRIOR;

Thus, a 3PLM was used for all MC items, and a Graded Response Model was specified for the polytomous items. The logistic version of the IRT models was used, and default priors were used for all parameter estimates. Each item occupied its own unique block in the command file, and for most items initial guessing parameters were set to 0.25.

The resulting parameters demonstrated excellent model fit. In particular, the largest change in parameter values (from one iteration to the next) was decreasing and tended to flatten out towards the end of the calibration process. The number of Newton cycles to conversion for each grade/content for the initial calibrations are listed in the following table:

Table 1.2.1
Number of Cycles to Convergence

Subject	Grade	Initial Cycles
English Language Arts	Grade 3	49
English Language Arts	Grade 4	90
English Language Arts	Grade 5	61
English Language Arts	Grade 6	71
English Language Arts	Grade 7	79
English Language Arts	Grade 8	37
Mathematics	Grade 3	55
Mathematics	Grade 4	48
Mathematics	Grade 5	64
Mathematics	Grade 6	60
Mathematics	Grade 7	67
Mathematics	Grade 8	60

For some items the guessing parameter was poorly estimated. This is not at all unusual as difficulty in estimating the c-parameter has been well documented in the psychometric literature. This often happens when item discrimination is low or the items are particularly easy. After carefully studying these items we found that fixing the lower asymptote (for example to a value of 0.00) resulted in stable and reasonable estimates for both the a and b parameters (relative to CTT statistics). This technique also produced item parameters that resulted in excellent model fit (comparing theoretical ICCs to observed ICCs).

Three methods of evaluating the suitability of the equating items were used: the delta analysis, the b/b analysis and the rescore analysis. As a result of all three analyses very few items were removed from the equating analysis. Results such as this are very common particularly, given the number of grade/content combinations, and the number and types of items in the program. Results from these analyses are included in Section II of this report.

Items flagged by the delta, b/b, or rescore analyses, or any item that required intervention during the calibration process, were compiled and placed in our item watch list, which includes the final actions taken on these items. The final watch list is presented in the following table:

Table 1.2.2

Final Items Watch List

Subject	Grade	ItemID	Reason	Action
English Language Arts	3	559851	delta analysis	removed from equating
English Language Arts	3	569376	b/b analysis	removed from equating
English Language Arts	4	420785	c-parameter	set c = 0
English Language Arts	4	420820	c-parameter	set c = 0
English Language Arts	4	543950	c-parameter	set c = 0
English Language Arts	4	544002	delta analysis	removed from equating
English Language Arts	4	544006	delta analysis	removed from equating
English Language Arts	4	544014	c-parameter	set c = 0
English Language Arts	4	544457	c-parameter	set c = 0
English Language Arts	4	544460	c-parameter	set c = 0
English Language Arts	4	552910	c-parameter	set c = 0
English Language Arts	4	552916	c-parameter	set c = 0
English Language Arts	4	552916	b/b analysis	removed from equating
English Language Arts	4	552924	a-parameter	a set to initial
English Language Arts	4	552924	c-parameter	set c = 0
English Language Arts	4	552933	c-parameter	set c = 0
English Language Arts	5	459823	c-parameter	set c = 0
English Language Arts	5	552537	b/b analysis	removed from equating
English Language Arts	5	552544	delta analysis	removed from equating
English Language Arts	6	130184A	rescore analysis	removed from equating
English Language Arts	6	409362	b/b analysis	removed from equating
English Language Arts	6	536935	c-parameter	set c = 0
English Language Arts	6	546223	c-parameter	set c = 0
English Language Arts	6	553114	c-parameter	set c = 0
English Language Arts	6	553120	c-parameter	set c = 0
English Language Arts	7	537742	delta analysis	removed from equating
English Language Arts	7	546948	c-parameter	set c = 0
English Language Arts	7	546948	b/b analysis	removed from equating
English Language Arts	8	402111	c-parameter	set c = 0
English Language Arts	8	420872	c-parameter	set c = 0
English Language Arts	8	420905	c-parameter	set c = 0
English Language Arts	8	420952	c-parameter	set c = 0
English Language Arts	8	420970	c-parameter	set c = 0
Mathematics	3	123978A	delta analysis	removed from equating
Mathematics	3	125246A	b/b analysis	removed from equating
Mathematics	4	124769A	delta analysis	removed from equating
Mathematics	4	126341A	c-parameter	set c = 0
Mathematics	4	126362A	c-parameter	set c = 0
Mathematics	4	400786	c-parameter	set c = 0
Mathematics	4	400795	c-parameter	set c = 0
Mathematics	4	405640	c-parameter	set c = 0

Table 1.2.2 (continued)

Final Items Watch List

Subject	Grade	ItemID	Reason	Action
Mathematics	4	407497	delta analysis	removed from equating
Mathematics	4	411727	c-parameter	set c = 0
Mathematics	4	411832	c-parameter	set c = 0
Mathematics	4	465876	c-parameter	set c = 0.2
Mathematics	4	532523	c-parameter	set c = 0
Mathematics	4	540258	c-parameter	set c = 0
Mathematics	4	540326	c-parameter	set c = 0
Mathematics	5	125951A	delta analysis	removed from equating
Mathematics	5	126058A	c-parameter	set c = 0.1
Mathematics	5	539177	b/b analysis	removed from equating
Mathematics	6	415140	b/b analysis	removed from equating
Mathematics	6	532604A	a-parameter	a set to initial
Mathematics	7	124350A	delta analysis	removed from equating
Mathematics	7	400327	b/b analysis	removed from equating
Mathematics	7	467844	b/b analysis	removed from equating
Mathematics	7	539442	a-parameter	a set to initial
Mathematics	8	409018	b/b analysis	removed from equating
Mathematics	8	413063	delta analysis	removed from equating
Mathematics	8	413229	c-parameter	set c = 0

The Stocking and Lord procedure was used to transform parameter estimates onto the operational scale. This procedure results in constants which were applied to the resulting IRT parameters for each grade/content. These transformation constants were found using the STUIRT program which can be found at the CASMA website: http://www.education.uiowa.edu/casma/. The Stocking & Lord transformation constants that were used in the equating process are listed in the following table:

Table 1.2.3

Stocking and Lord Constants

Subject	Grade	Slope	Intercept
English Language Arts	3	0.99	0.08
English Language Arts	4	0.94	0.14
English Language Arts	5	0.95	0.01
English Language Arts	6	0.96	0.21
English Language Arts	7	1.03	0.22
English Language Arts	8	0.98	0.24
Mathematics	3	1.01	-0.10
Mathematics	4	0.95	0.03
Mathematics	5	0.97	-0.02
Mathematics	6	1.02	-0.19
Mathematics	7	0.99	-0.04
Mathematics	8	0.94	0.07

Section 1.3

Equating Item Summary Statistics

Table 1.3.1

Equating Item Summary Statistics

			P-Value		Point Biserial		a		b	
Subject	Grade	Year	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
English Language Arts	03	2019	0.55	0.17	0.41	0.11	0.88	0.33	0.16	0.92
		Previous	0.55	0.20	0.38	0.10	0.96	0.26	0.33	0.94
English Language Arts	04	2019	0.56	0.17	0.39	0.11	0.80	0.35	-0.04	0.91
		Previous	0.55	0.18	0.37	0.11	0.92	0.38	0.23	0.84
English Language Arts	05	2019	0.55	0.18	0.37	0.10	0.78	0.28	0.20	1.09
		Previous	0.54	0.18	0.36	0.11	0.81	0.31	0.28	0.97
English Language Arts	06	2019	0.58	0.17	0.37	0.09	0.77	0.27	-0.12	0.96
		Previous	0.57	0.17	0.37	0.10	0.82	0.26	0.19	0.83
English Language Arts	07	2019	0.57	0.14	0.39	0.09	0.80	0.28	-0.03	0.75
		Previous	0.57	0.15	0.38	0.09	0.81	0.28	0.24	0.71
English Language Arts	08	2019	0.57	0.16	0.38	0.11	0.75	0.27	-0.05	0.86
		Previous	0.57	0.17	0.37	0.10	0.81	0.30	0.22	0.82
Mathematics	03	2019	0.54	0.15	0.36	0.09	0.93	0.26	0.32	0.80
		Previous	0.54	0.14	0.35	0.10	0.90	0.25	0.32	0.75
Mathematics	04	2019	0.48	0.17	0.32	0.10	0.74	0.30	0.58	1.36
		Previous	0.48	0.17	0.32	0.10	0.92	0.26	0.65	0.97
Mathematics	05	2019	0.49	0.18	0.32	0.11	0.96	0.34	0.61	1.00
		Previous	0.50	0.18	0.32	0.11	0.99	0.38	0.63	0.90
Mathematics	06	2019	0.48	0.18	0.30	0.10	0.94	0.39	0.64	1.07
		Previous	0.49	0.17	0.30	0.11	0.90	0.32	0.56	1.05
Mathematics	07	2019	0.44	0.17	0.32	0.12	1.04	0.44	0.94	1.02
		Previous	0.45	0.17	0.32	0.12	0.99	0.35	0.92	1.05
Mathematics	08	2019	0.46	0.17	0.28	0.11	0.98	0.28	0.95	1.14
		Previous	0.46	0.18	0.28	0.11	1.05	0.40	1.09	1.49

Section 1.4

Summary of Psychometric QC Activities

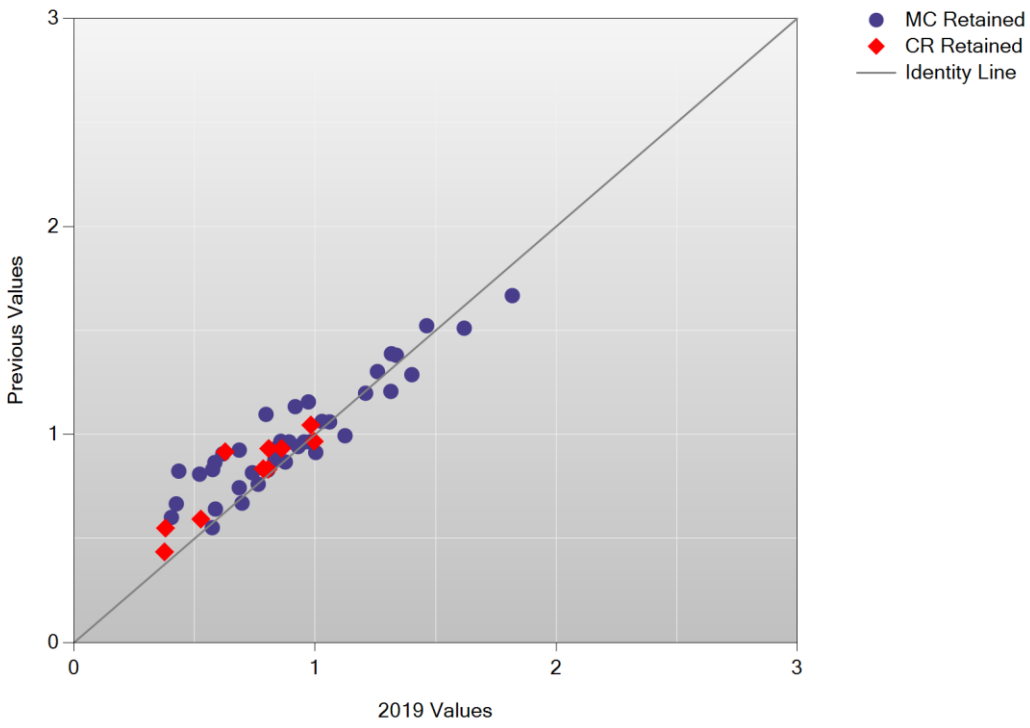
Summary of Psychometric Quality Control Activities

1. Copy match of equating items
2. Key verification process
3. Position shift analysis
4. Rescore analysis
    a. Stat > 0.5 (Crit) removed
5. Delta analysis
    a. Stat > 3 (Crit) removed
6. b/b analysis
    a. Stat > 3 (Crit) removed
7. Equating Analysis
    a. Reasonableness of item parameters
    b. Low a, high SE on b, c parameter poorly estimated
    c. Fit plot
    d. Normal end evaluation
    e. Delta plot
    f. a/a plot, b/b plot
    g. TCCs and information functions
    h. Achievement levels and scaled score distributions
8. Watch List (items were continuously evaluated)
    a. 8 criteria
    b. Statistical values
    c. Content

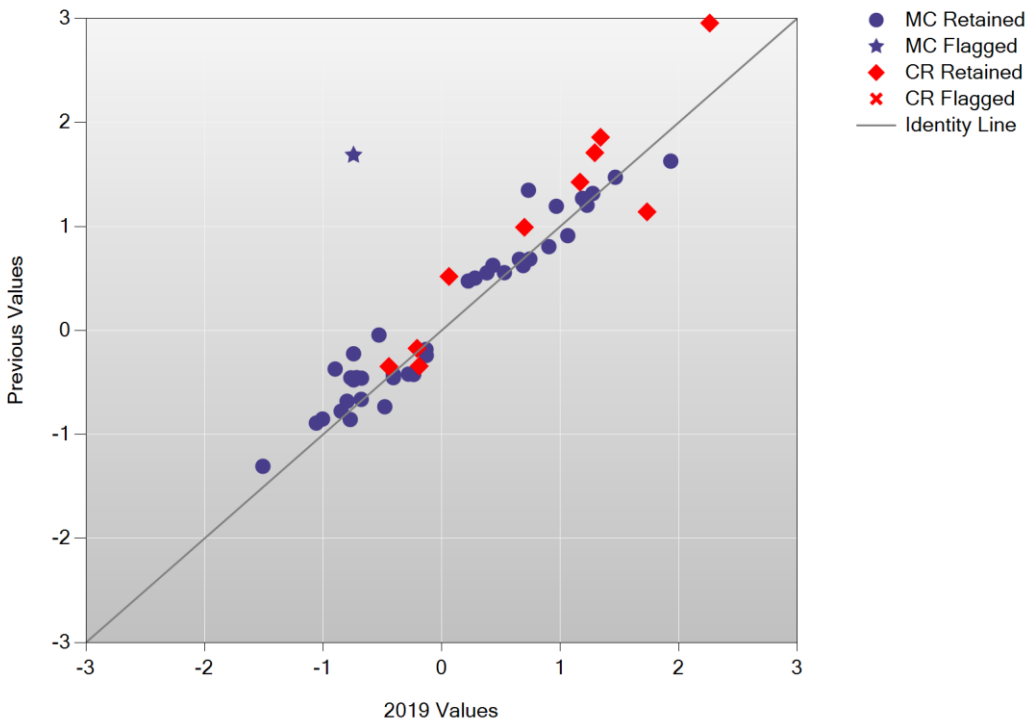
Section 2.1

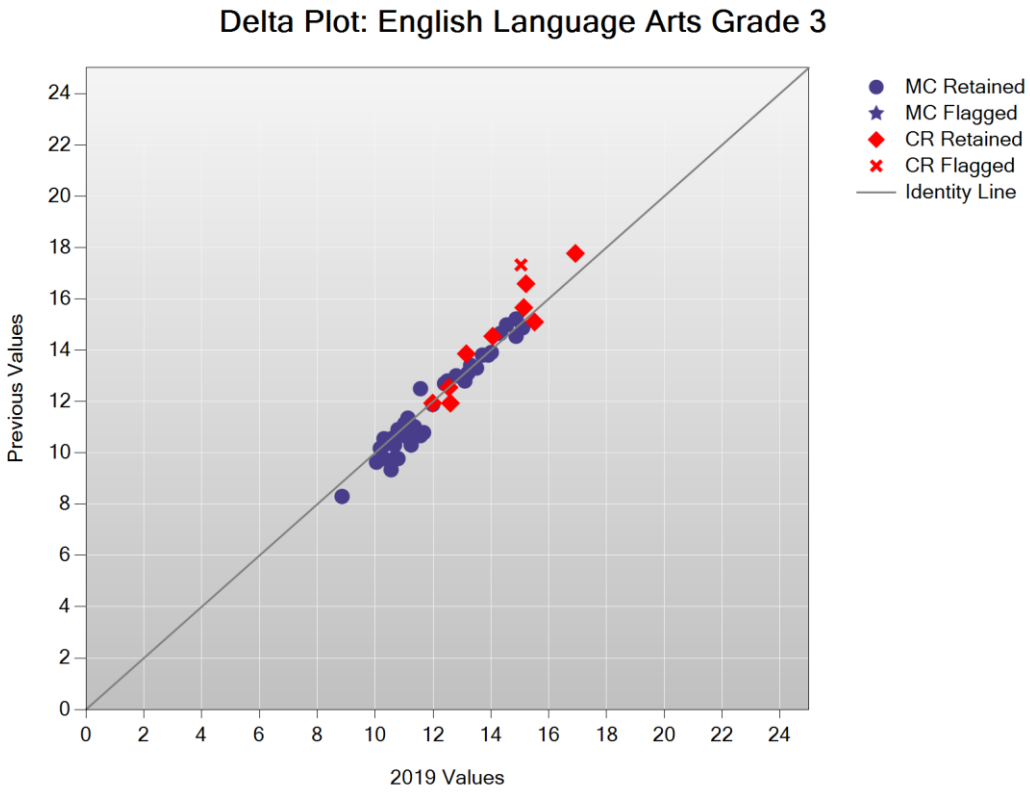
A/A, B/B, Delta, Test Characteristic Curve, Test Information Function, and Cumulative Scale Score Distribution Plots

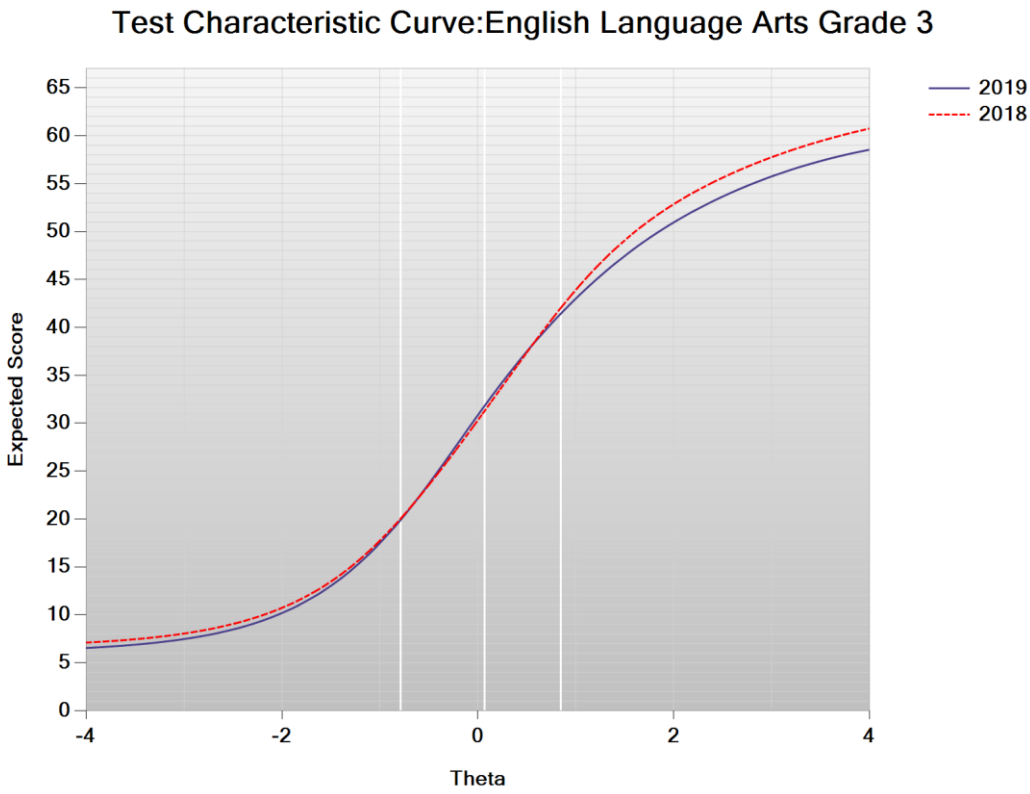
A/A Plot: English Language Arts Grade 3



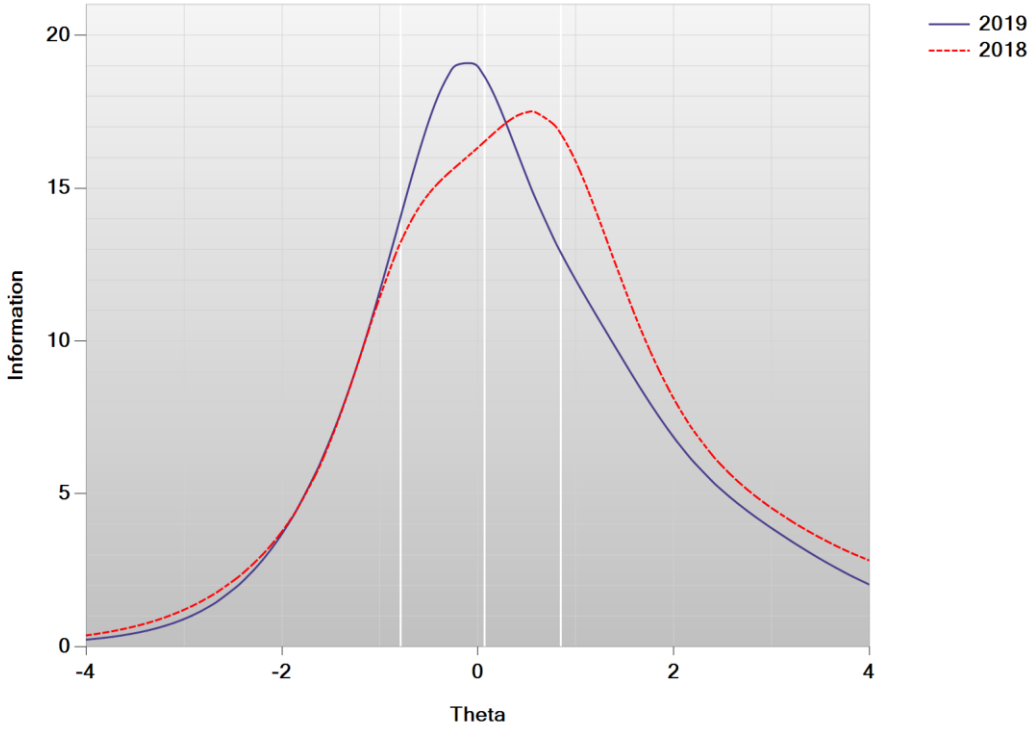
B/B Plot: English Language Arts Grade 3



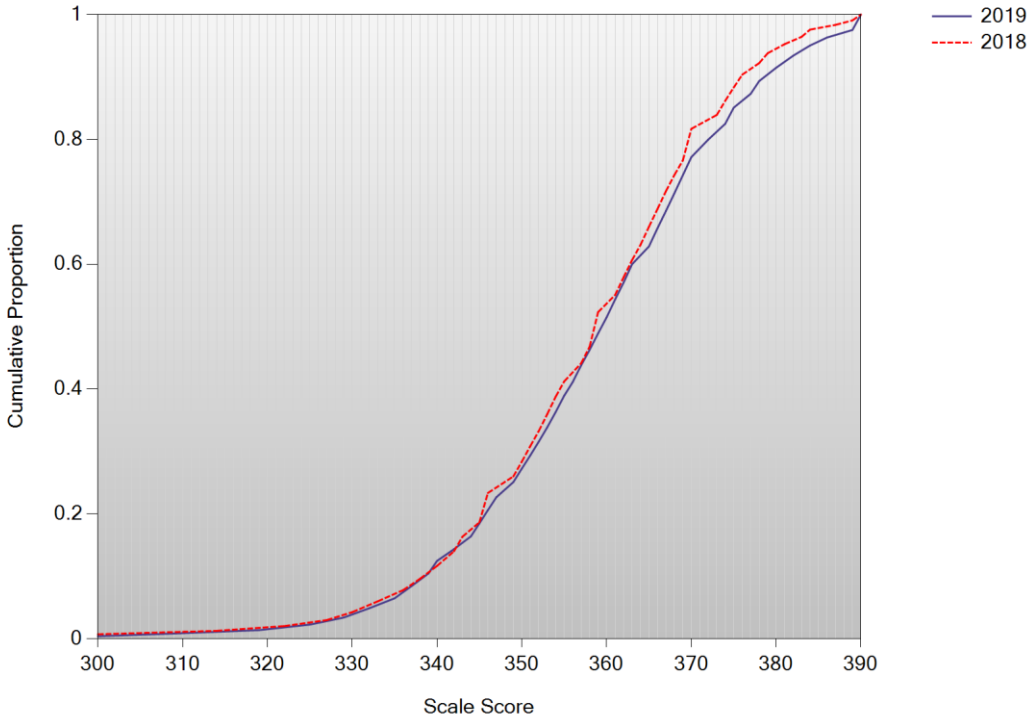

Delta Plot: English Language Arts Grade 3
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line


Test Characteristic Curve:English Language Arts Grade 3
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
55
60
65
-4
-2
0
2
4
2019
2018

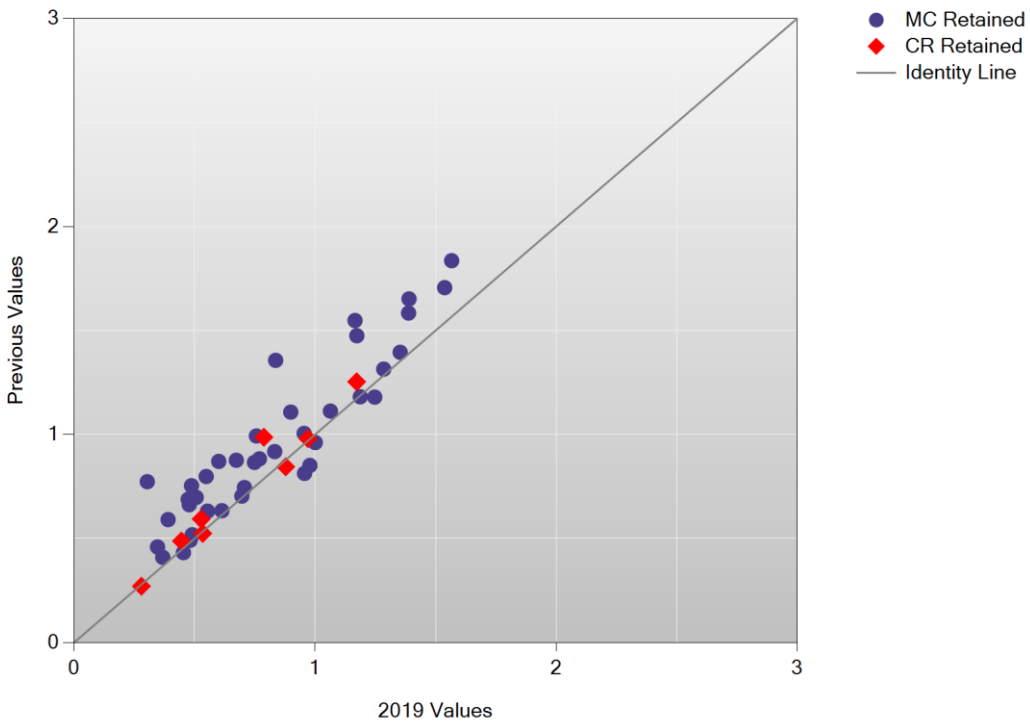
Test Information Function: English Language Arts Grade 3



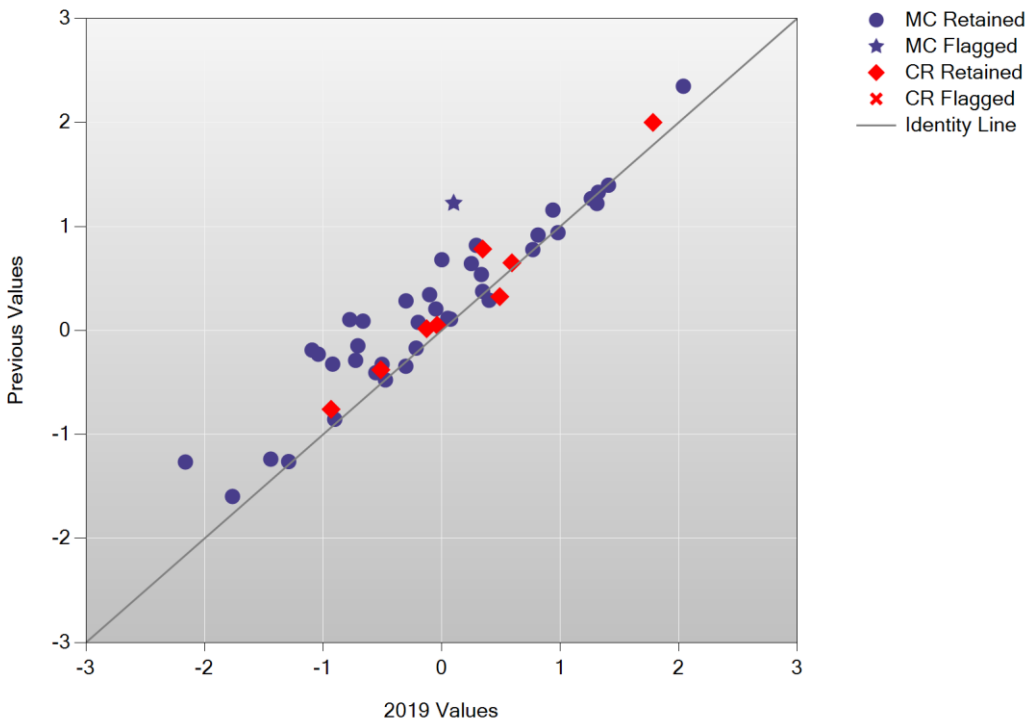
Cumulative Scale Score Distributions: English Language Arts Grade 3

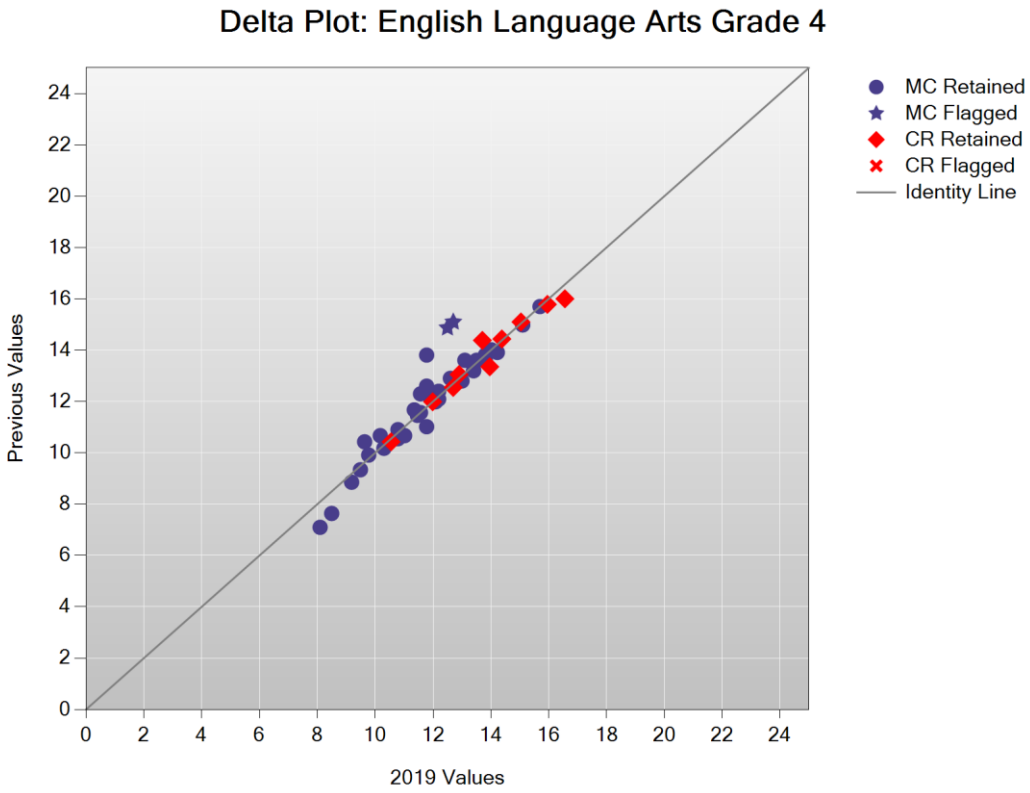


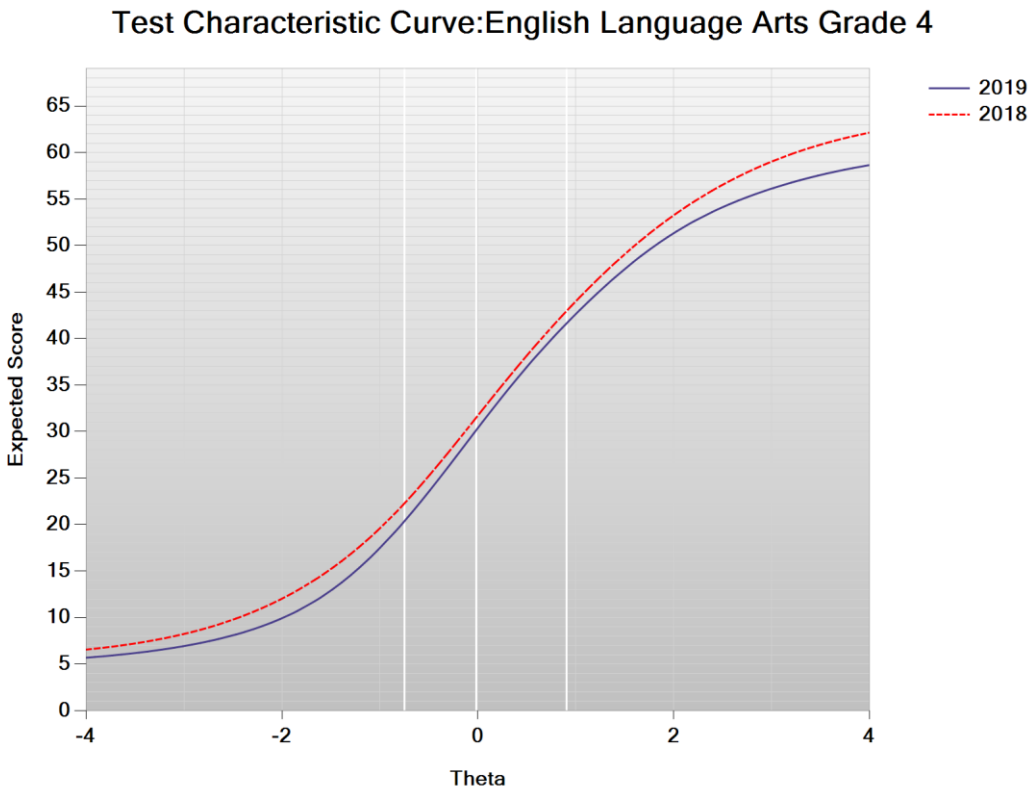
A/A Plot: English Language Arts Grade 4



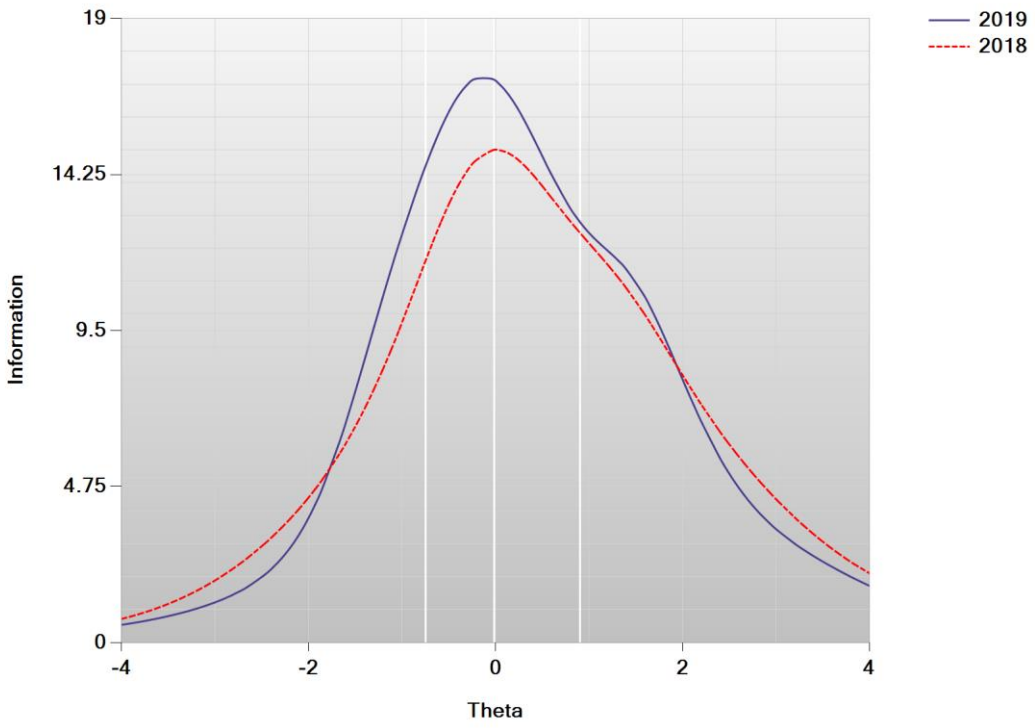
B/B Plot: English Language Arts Grade 4



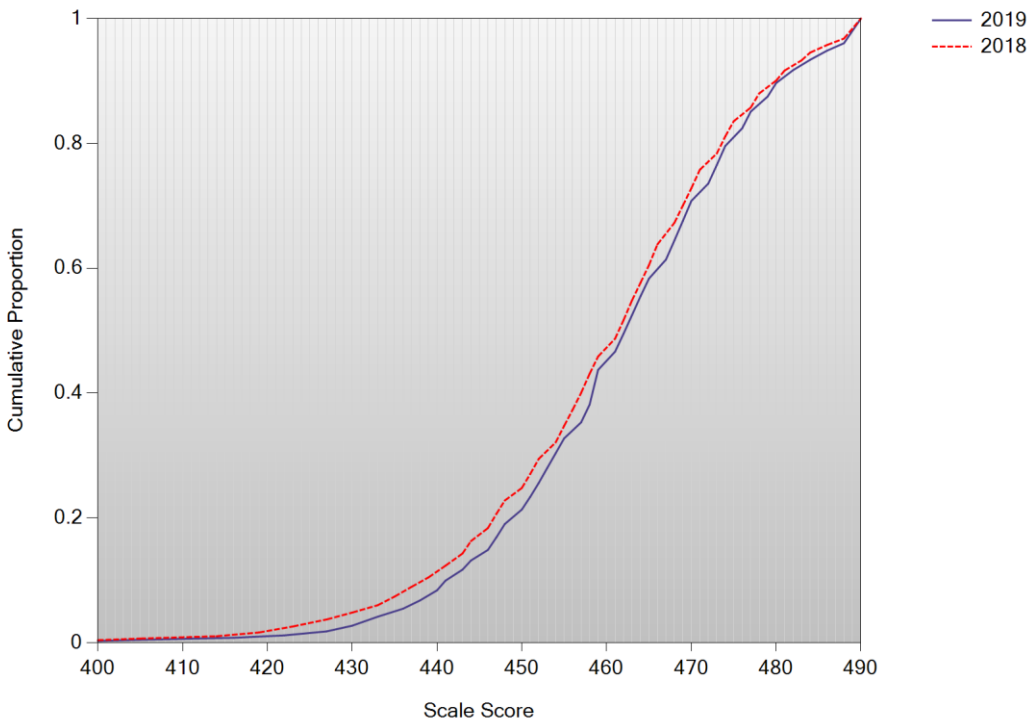

Delta Plot: English Language Arts Grade 4
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24


Test Characteristic Curve:English Language Arts Grade 4
2019
2018
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
55
60
65
-4
-2
0
2
4

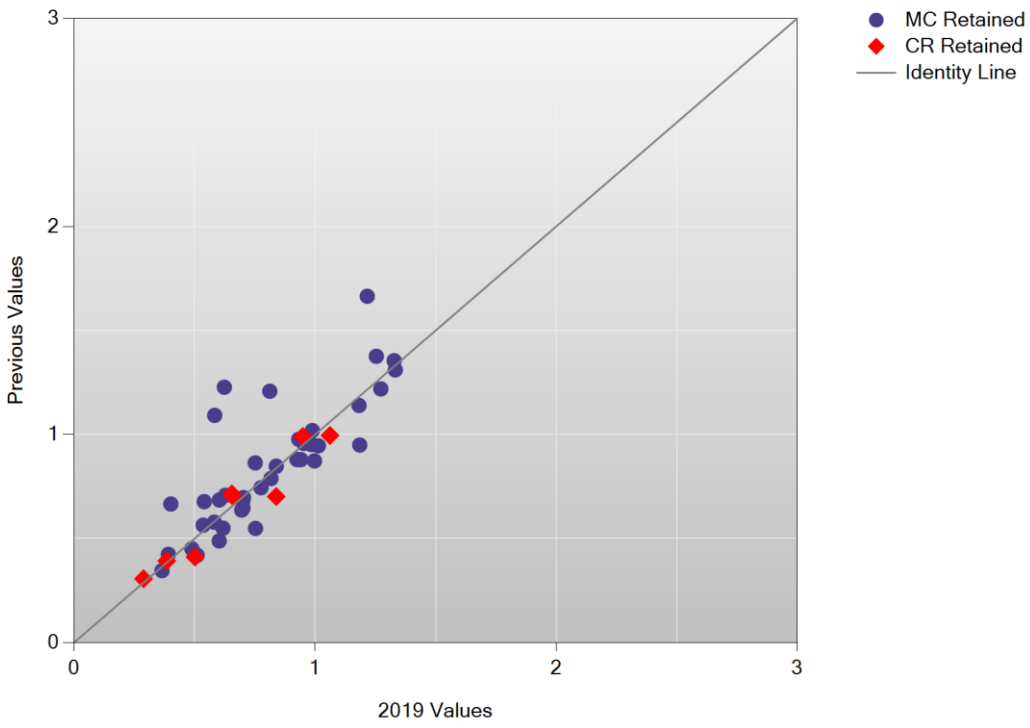
Test Information Function: English Language Arts Grade 4



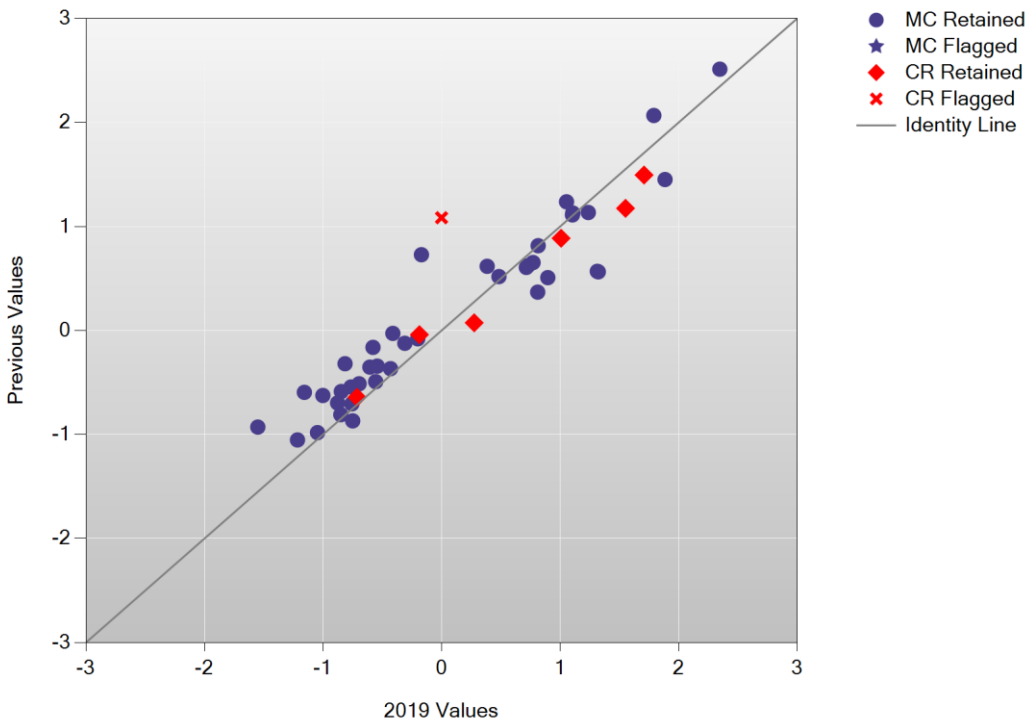
Cumulative Scale Score Distributions: English Language Arts Grade 4

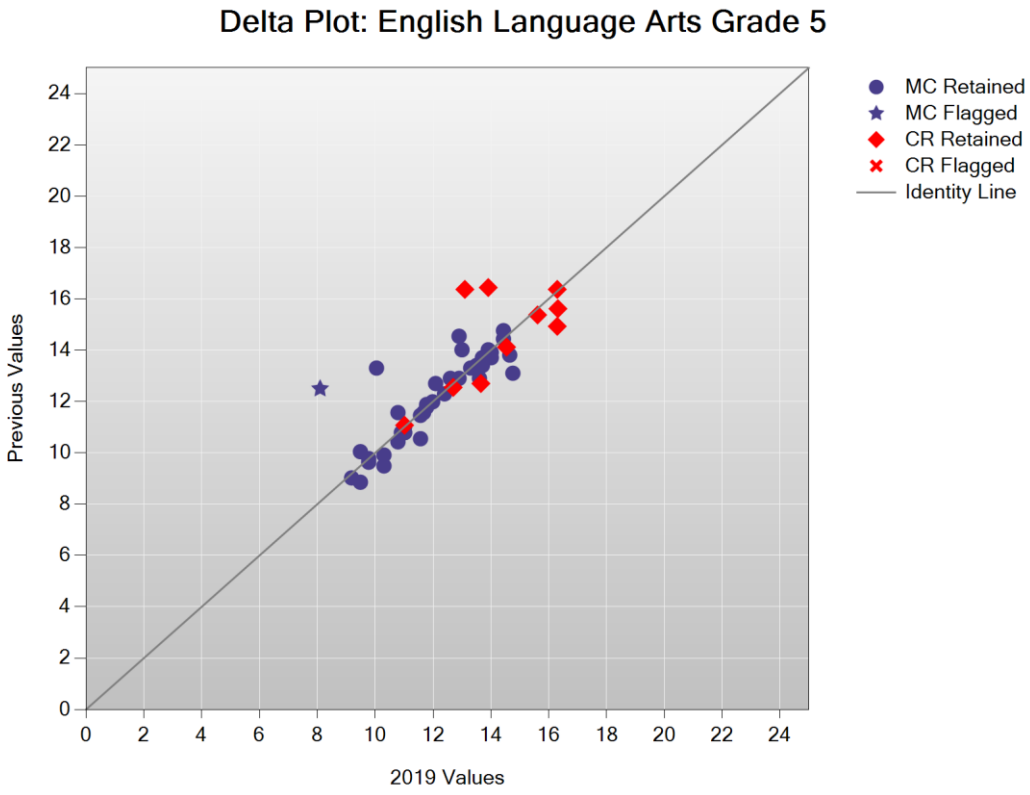


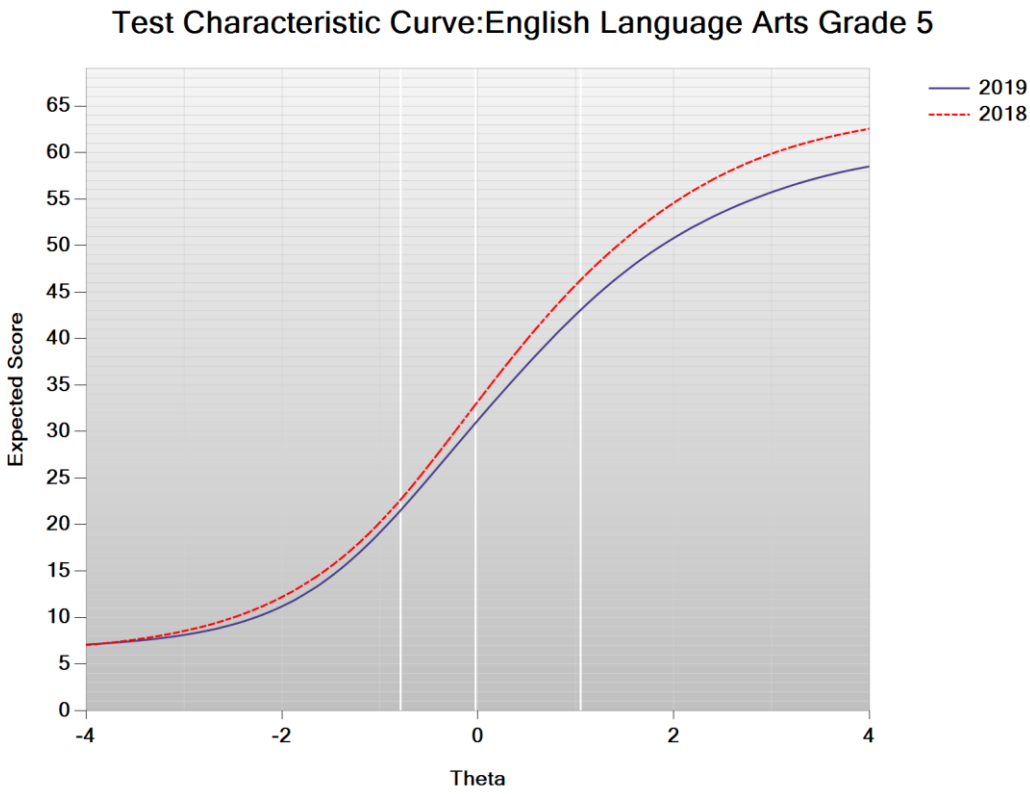
A/A Plot: English Language Arts Grade 5



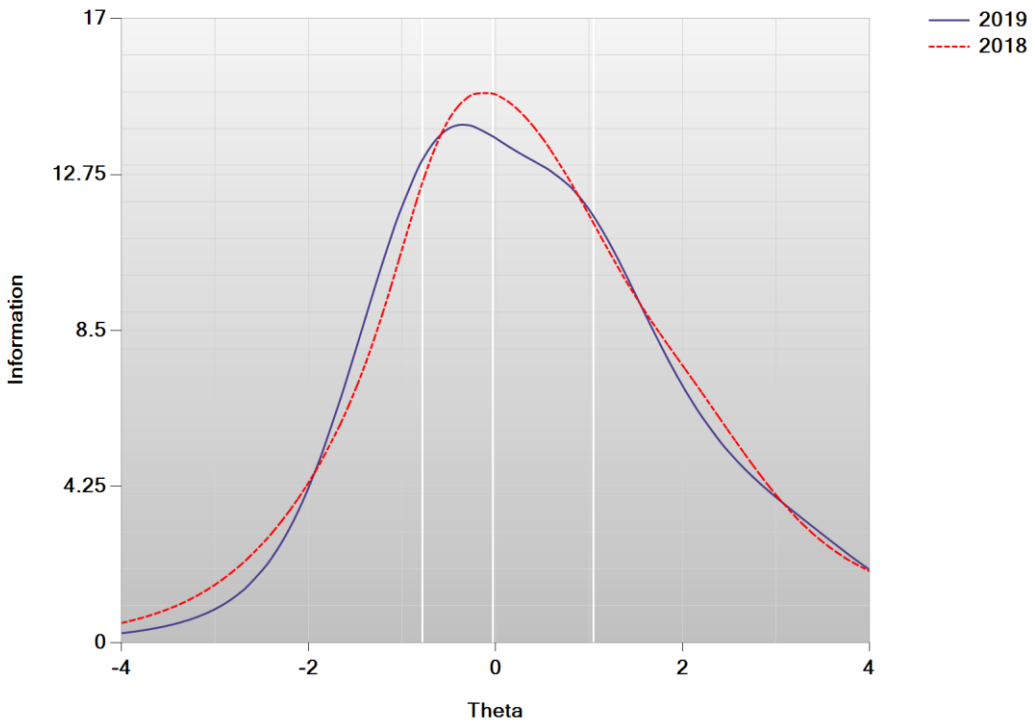
B/B Plot: English Language Arts Grade 5



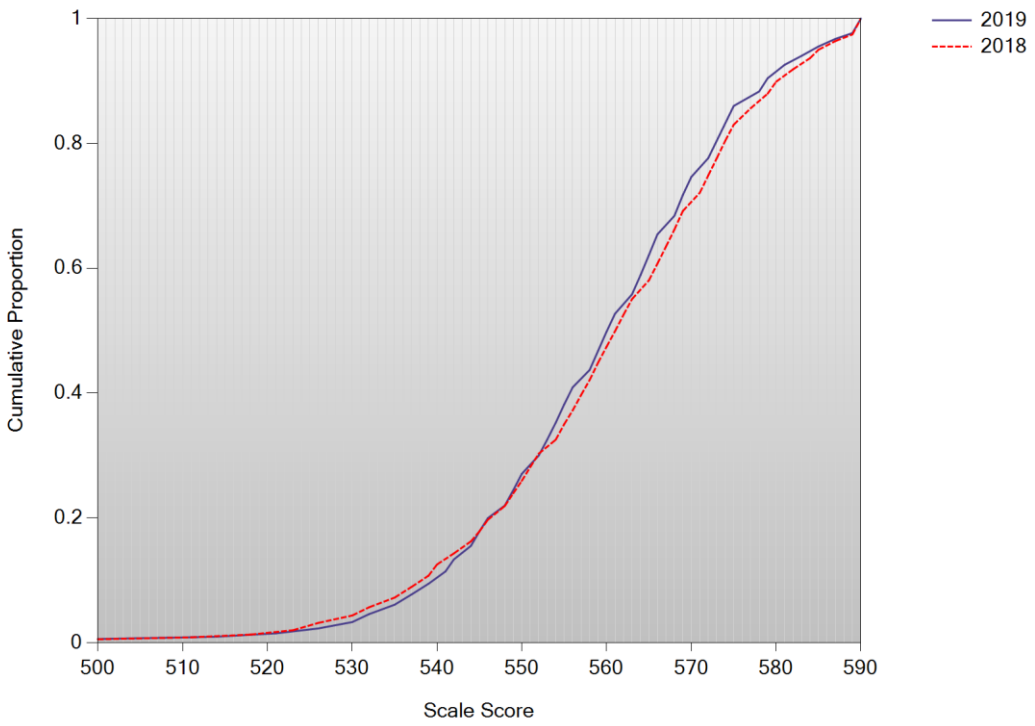

Delta Plot: English Language Arts Grade 5
Previous Values
2019 Values
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line


Test Characteristic Curve:English Language Arts Grade 5
Expected Score
Theta
2019
2018

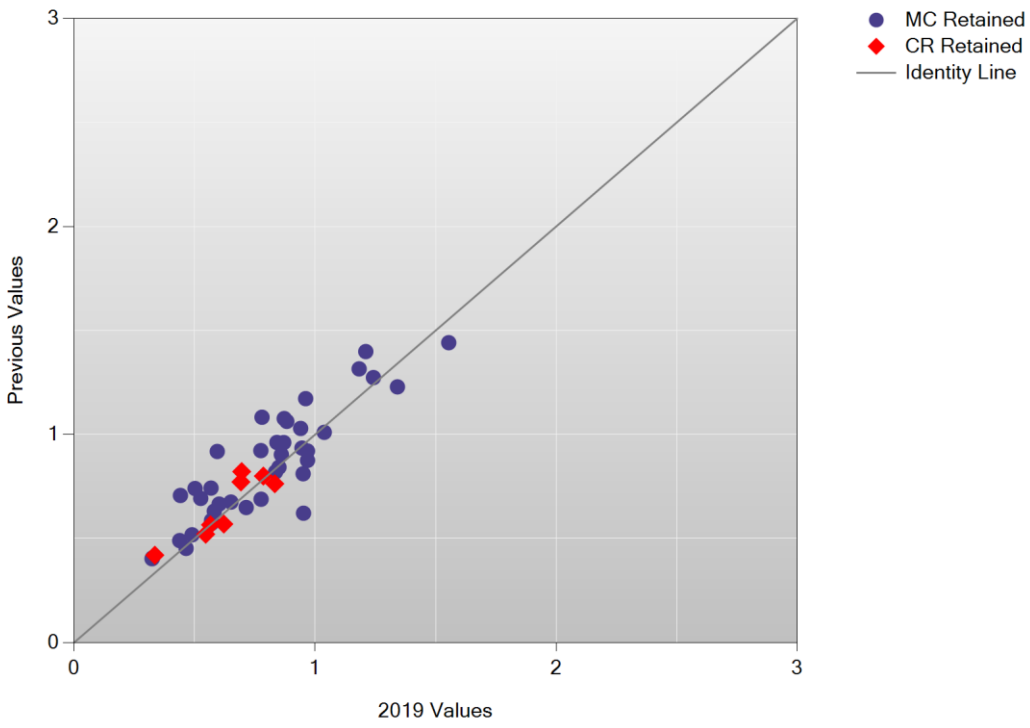
Test Information Function: English Language Arts Grade 5



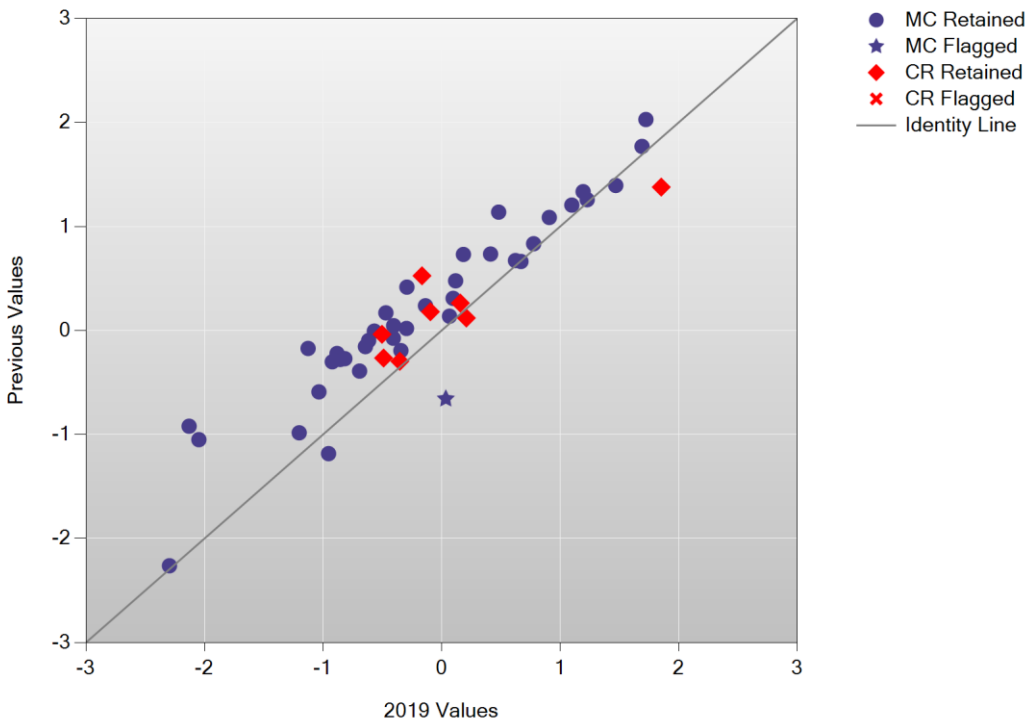
Cumulative Scale Score Distributions: English Language Arts Grade 5

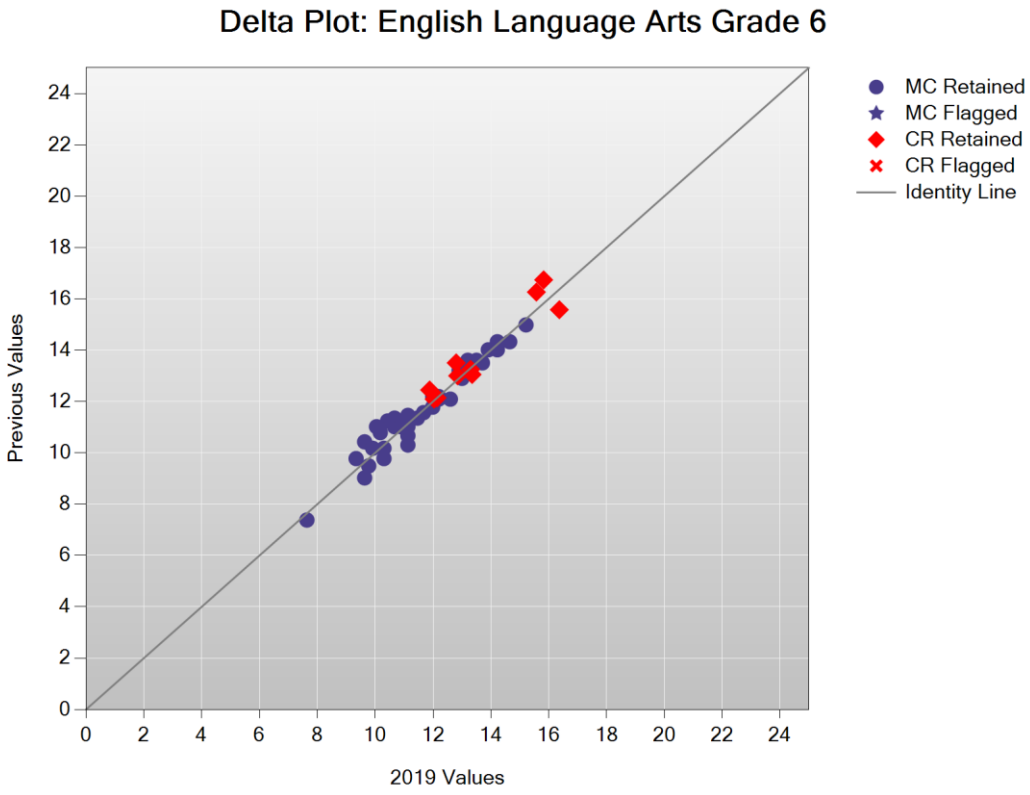


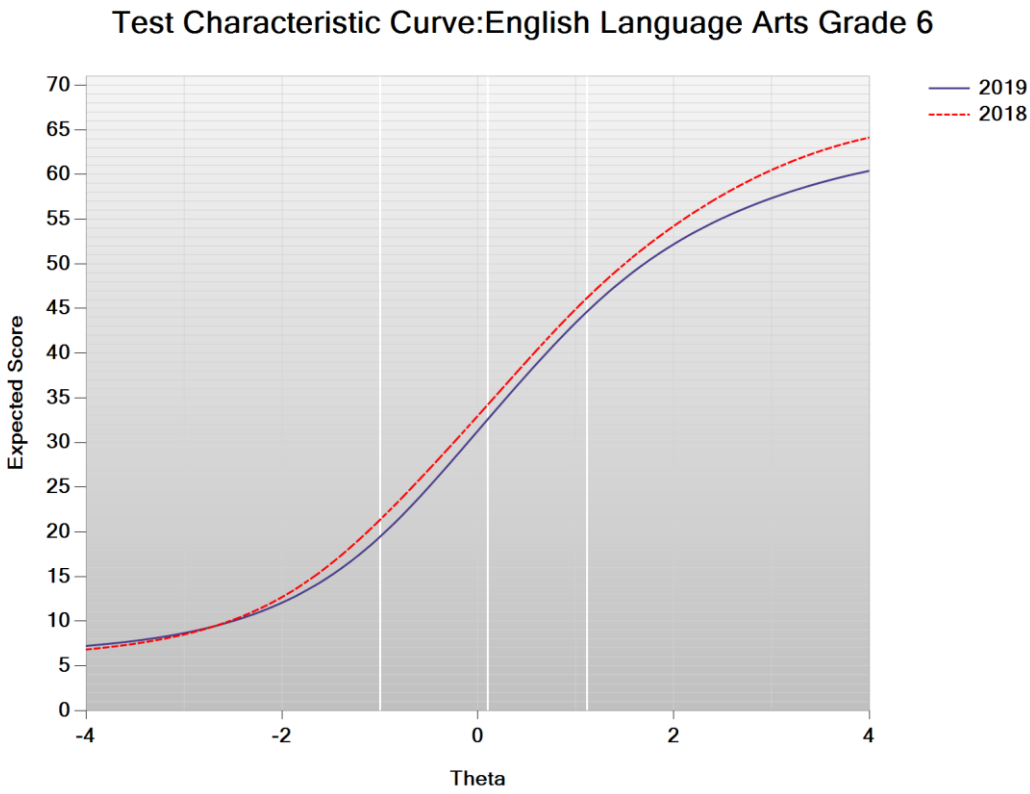
A/A Plot: English Language Arts Grade 6



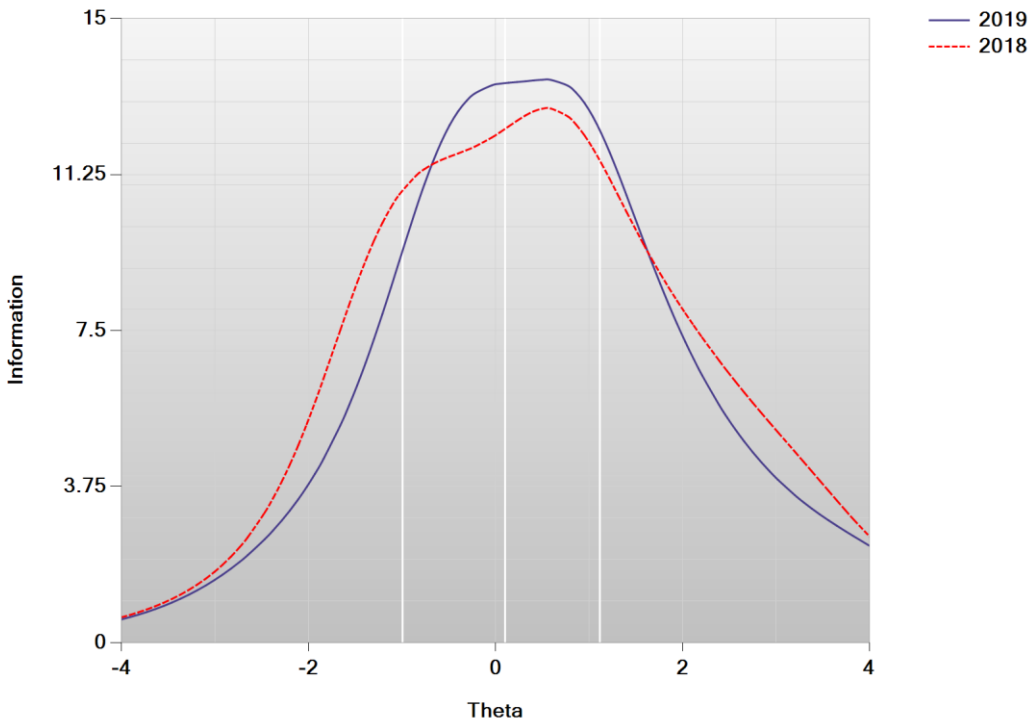
B/B Plot: English Language Arts Grade 6



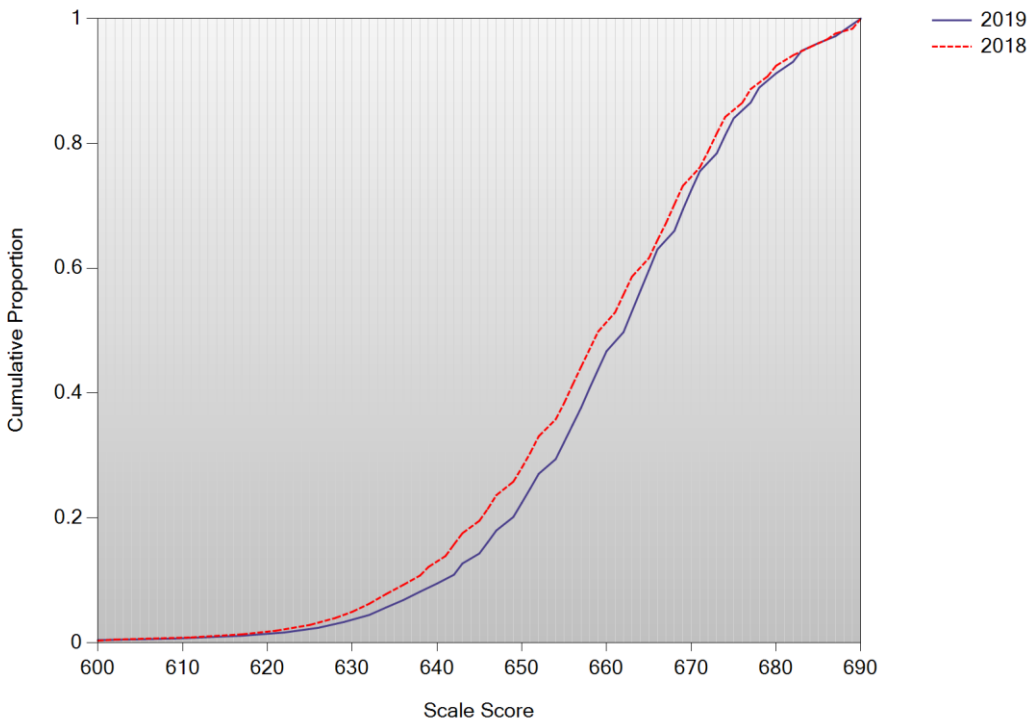

Delta Plot: English Language Arts Grade 6
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24


Test Characteristic Curve:English Language Arts Grade 6
2019
2018
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
-4
-2
0
2
4

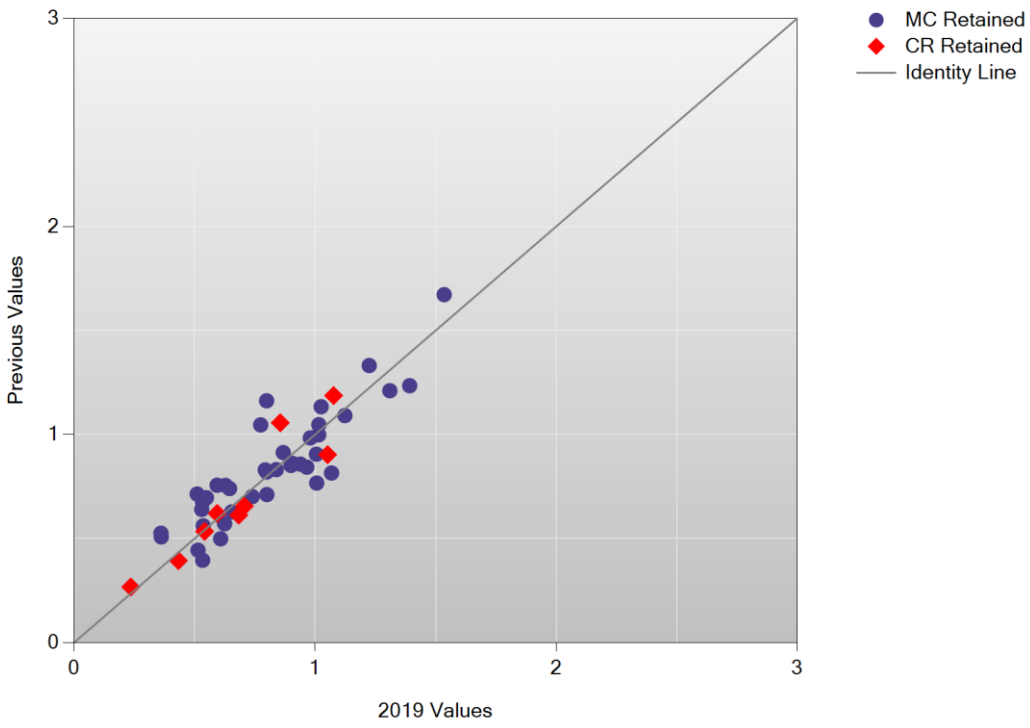
Test Information Function: English Language Arts Grade 6



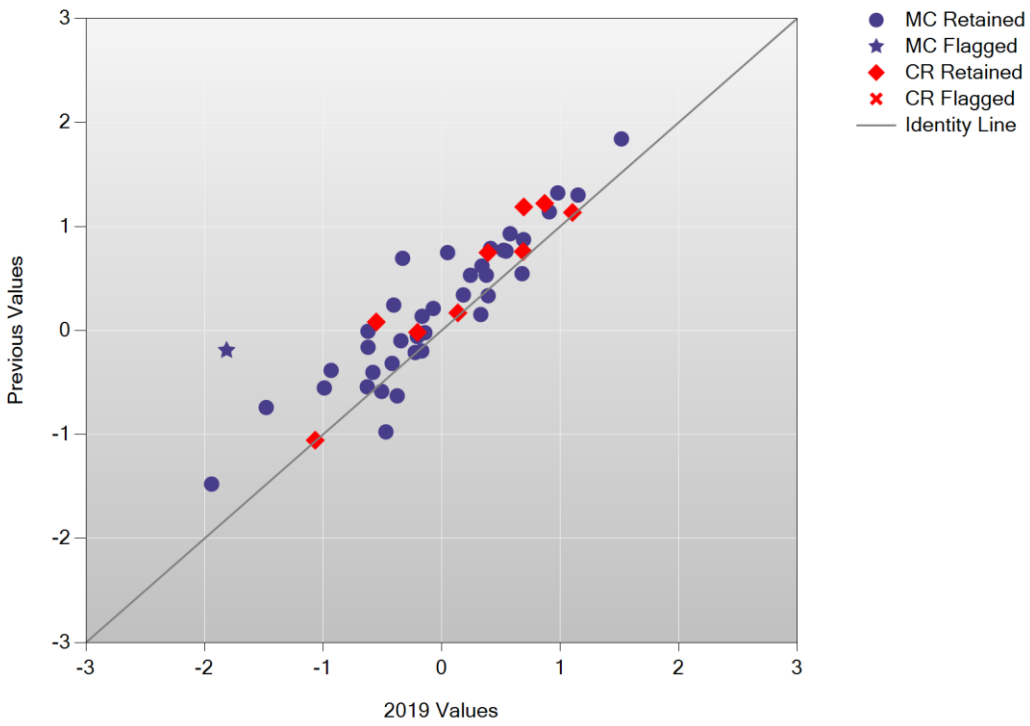
Cumulative Scale Score Distributions: English Language Arts Grade 6

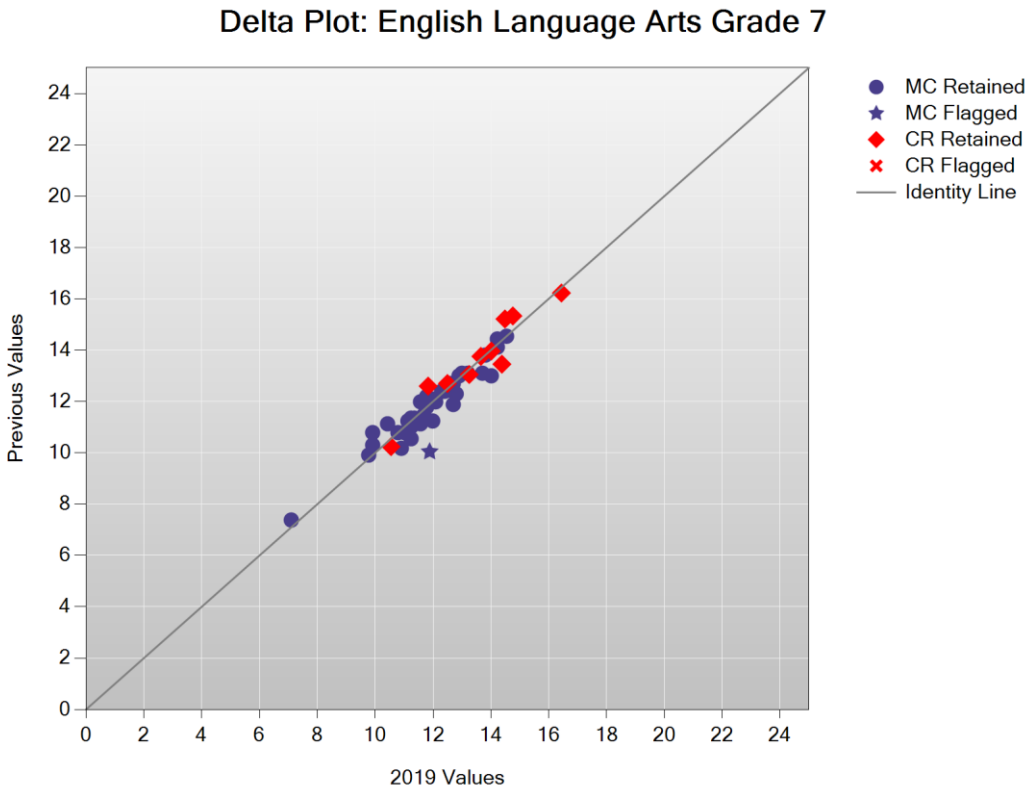


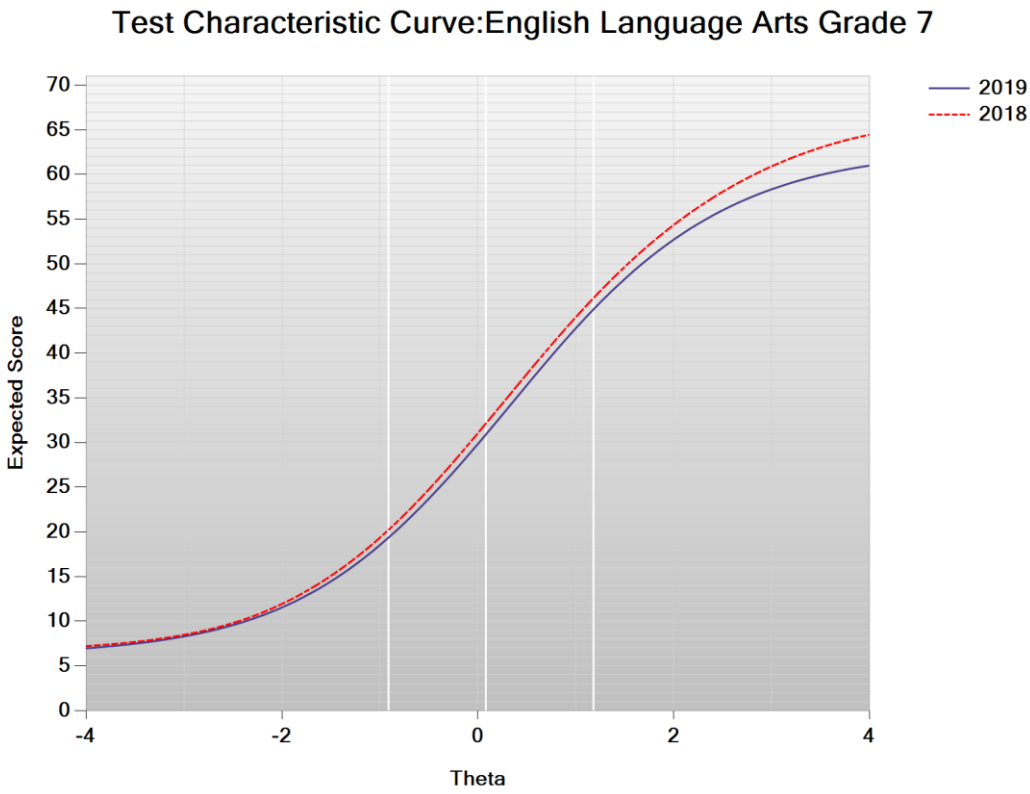
A/A Plot: English Language Arts Grade 7



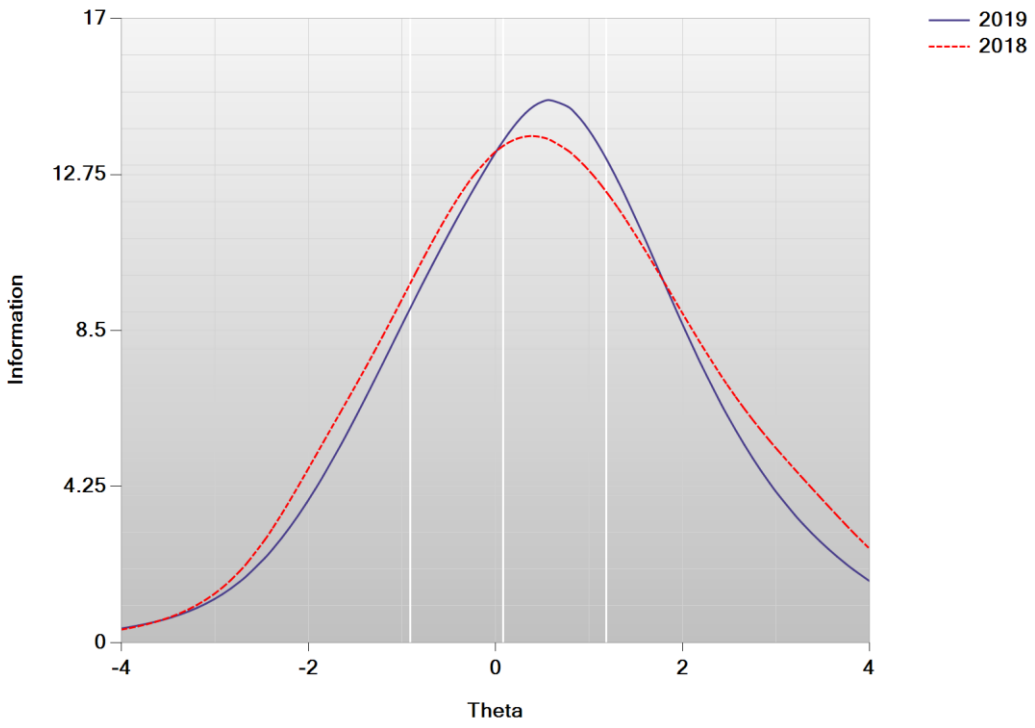
B/B Plot: English Language Arts Grade 7



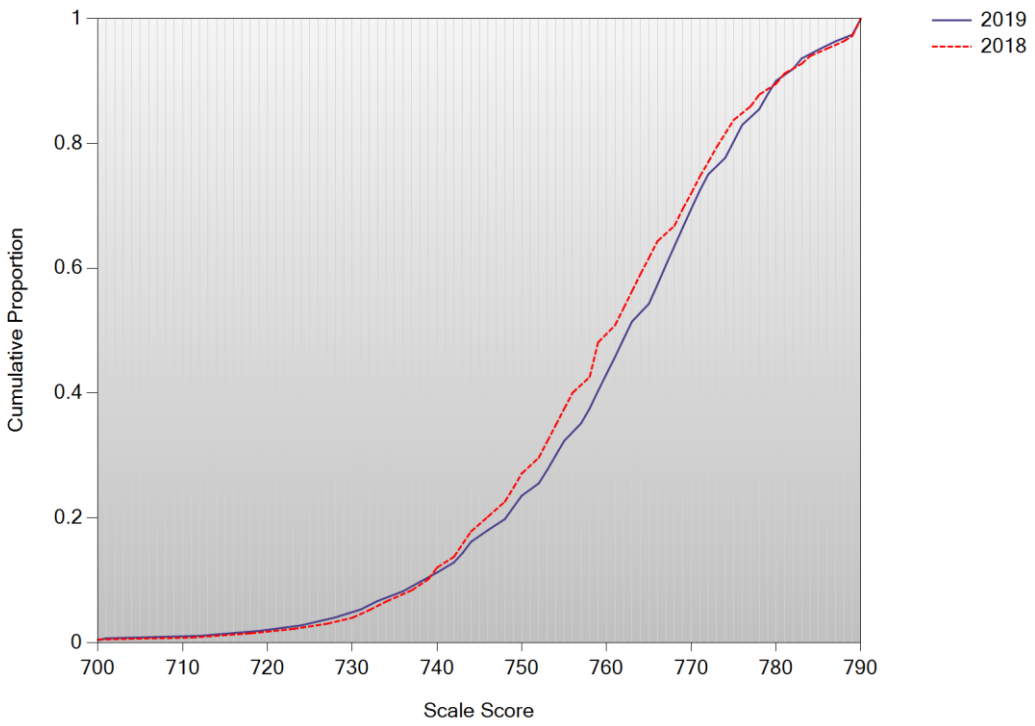

Delta Plot: English Language Arts Grade 7
Previous Values
2019 Values
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line


Test Characteristic Curve:English Language Arts Grade 7
Expected Score
Theta
2019
2018

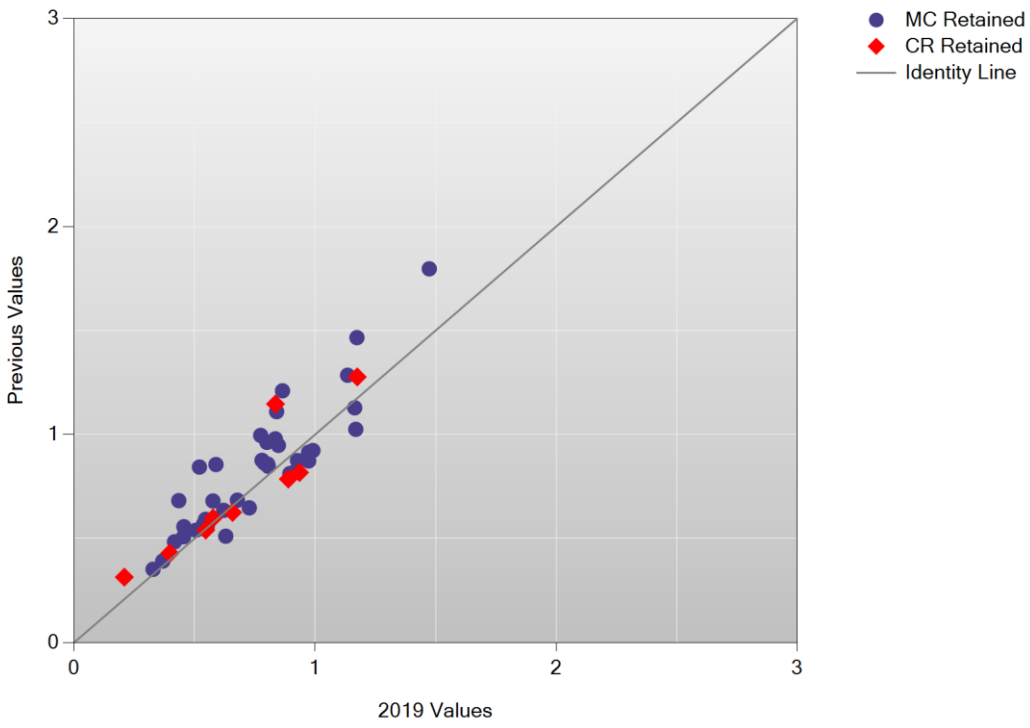
Test Information Function: English Language Arts Grade 7



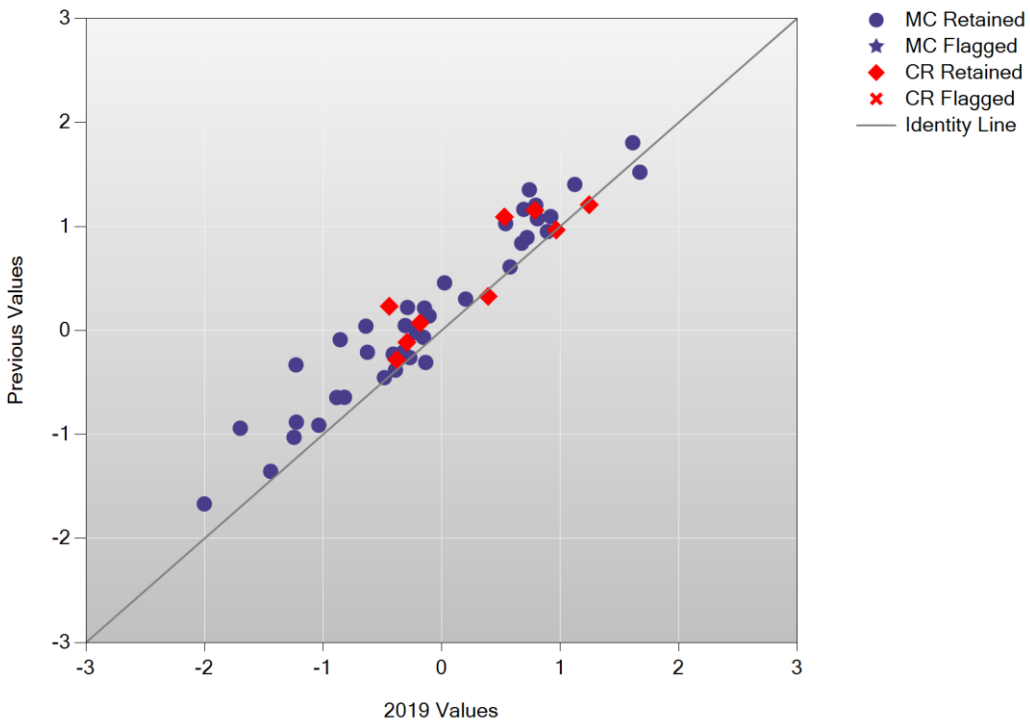
Cumulative Scale Score Distributions: English Language Arts Grade 7

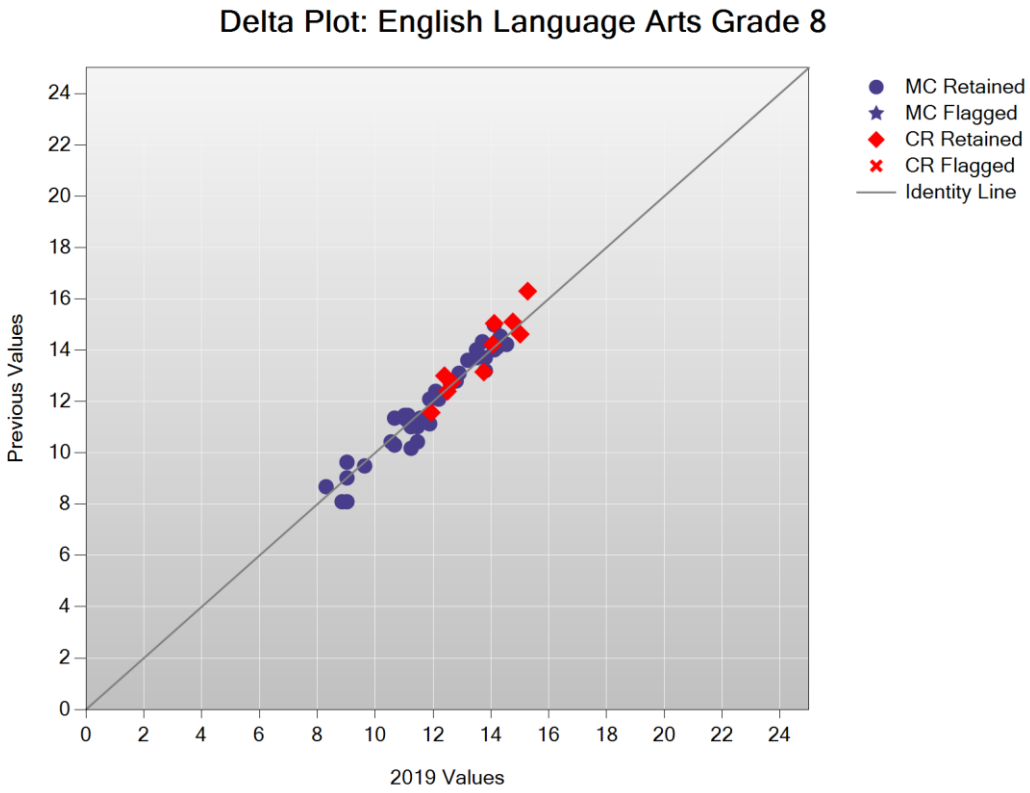


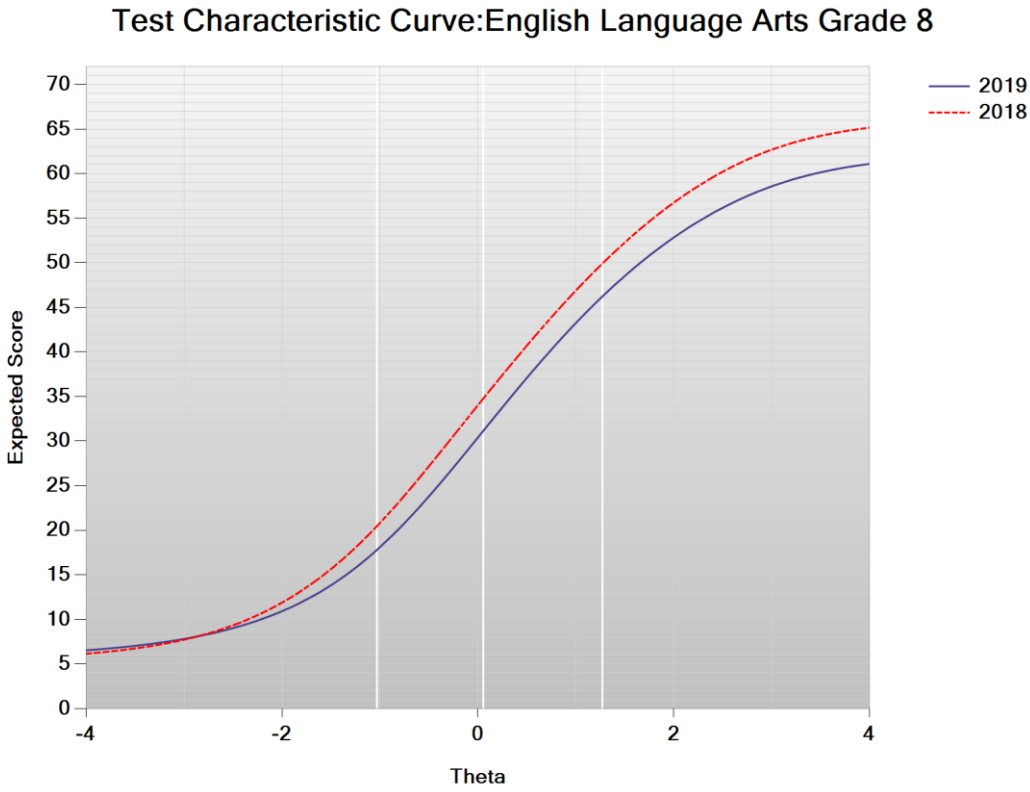
A/A Plot: English Language Arts Grade 8



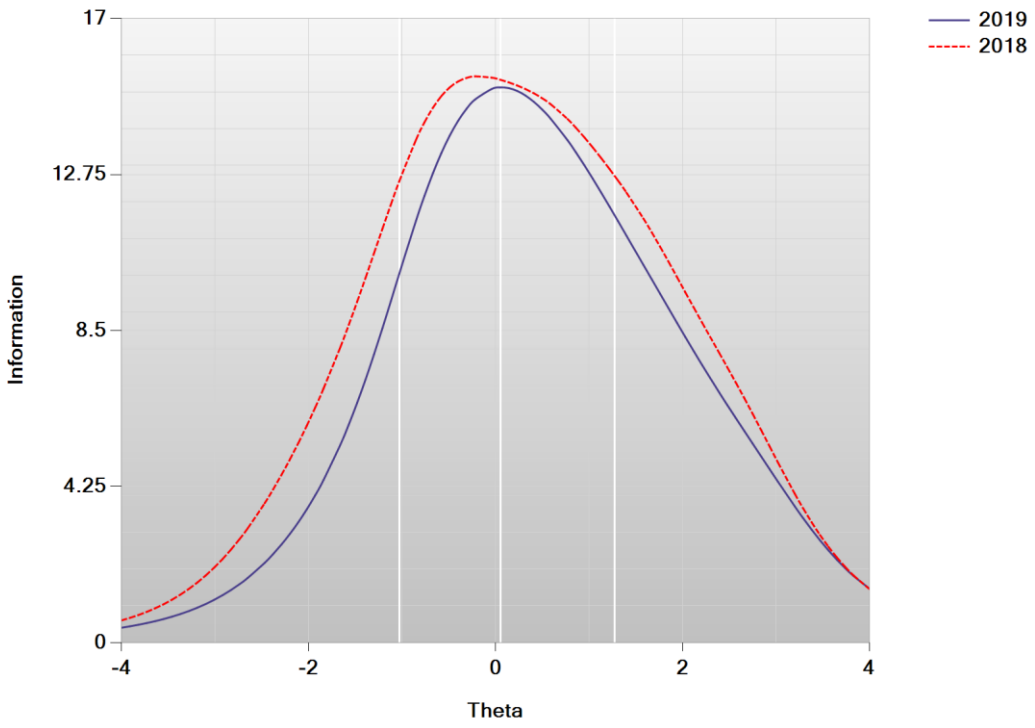
B/B Plot: English Language Arts Grade 8



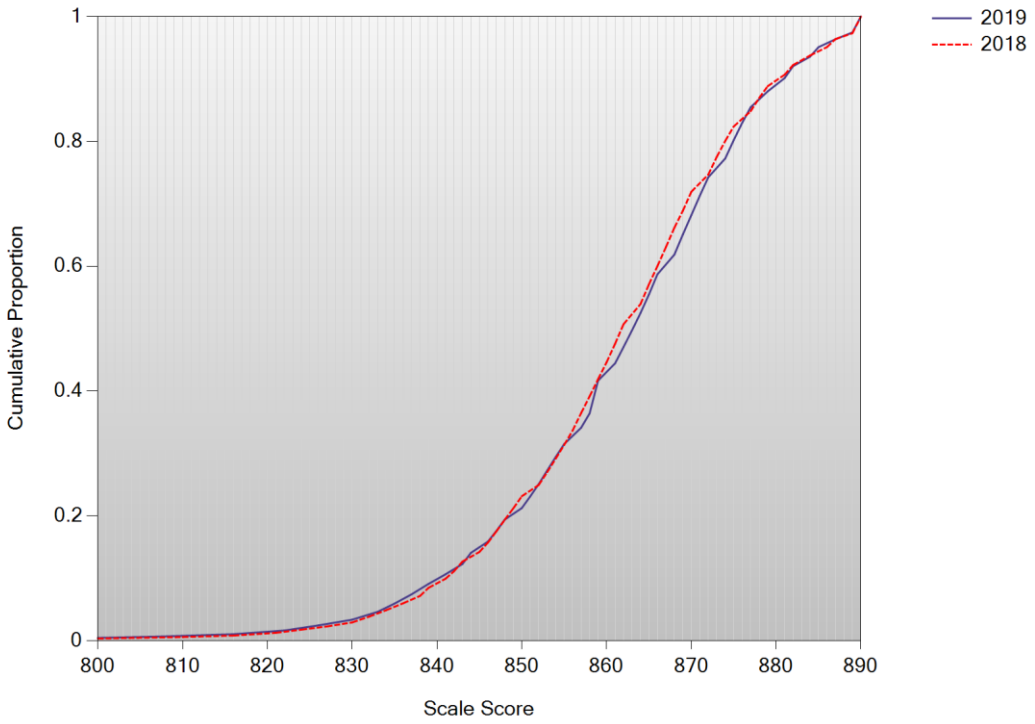

Delta Plot: English Language Arts Grade 8
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line


Test Characteristic Curve:English Language Arts Grade 8
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
-4
-2
0
2
4
2019
2018

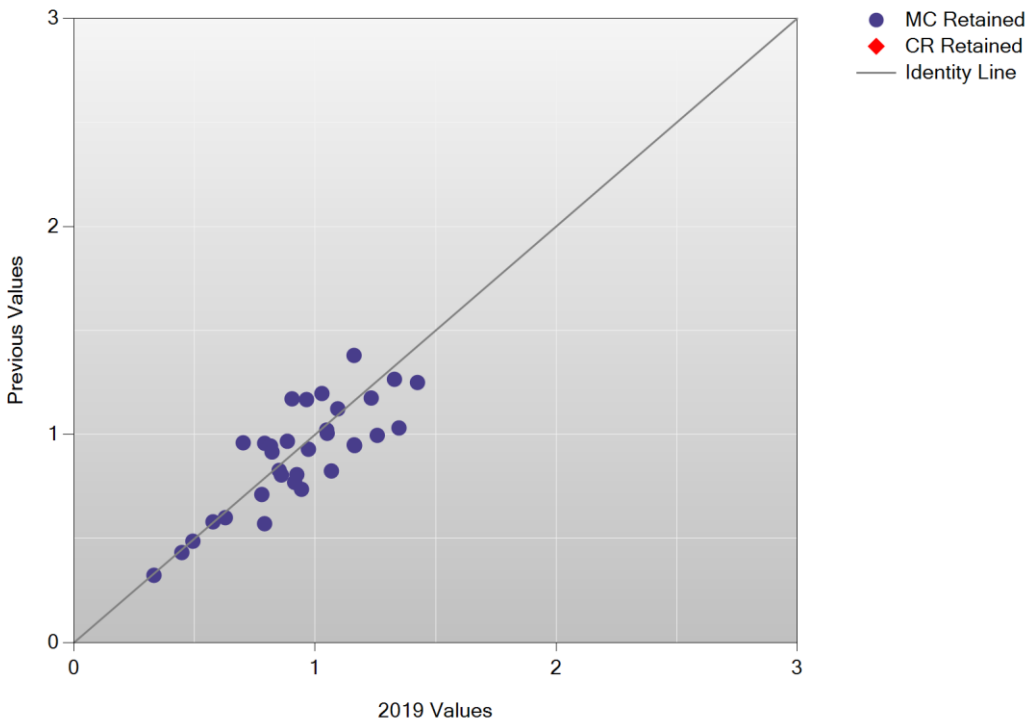
Test Information Function: English Language Arts Grade 8



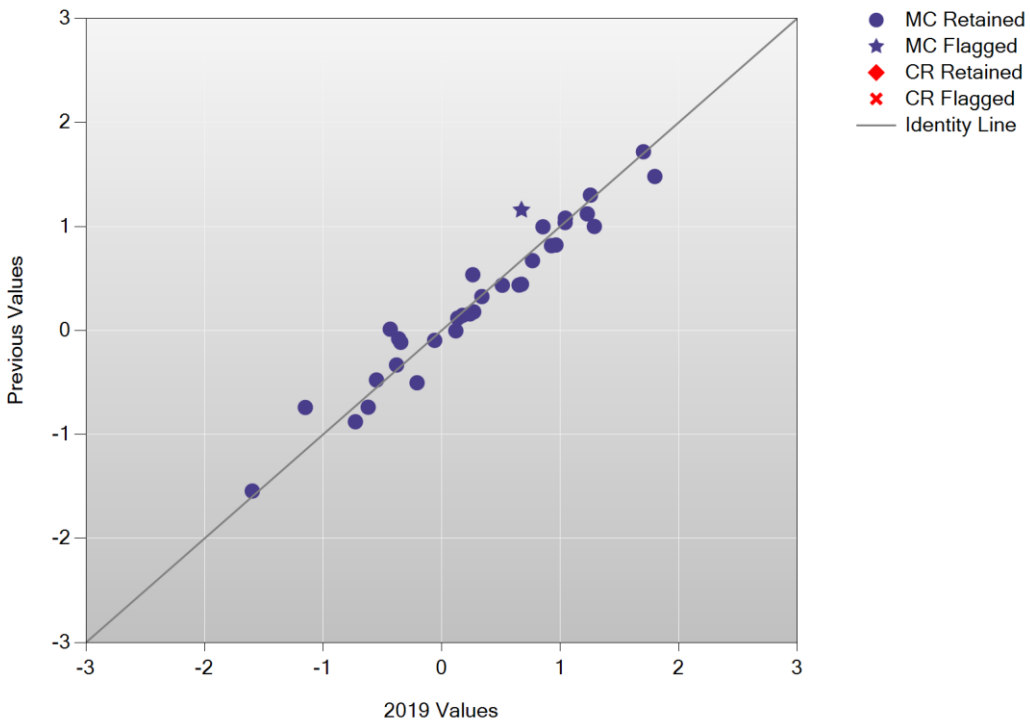
Cumulative Scale Score Distributions: English Language Arts Grade 8

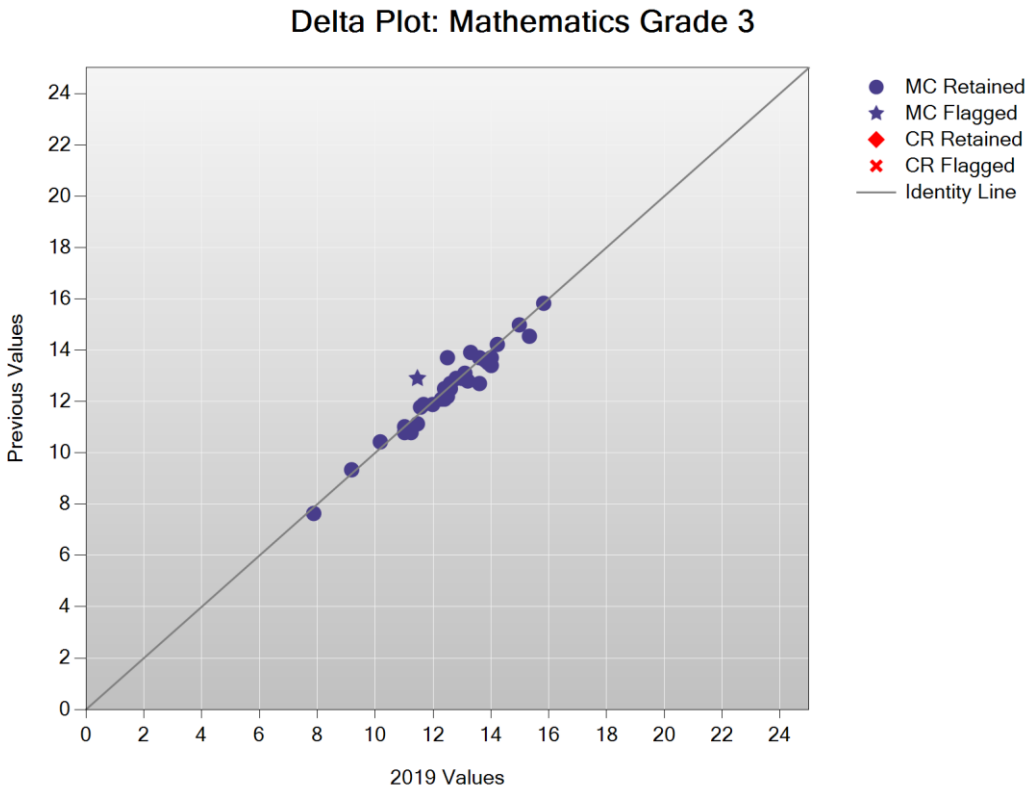


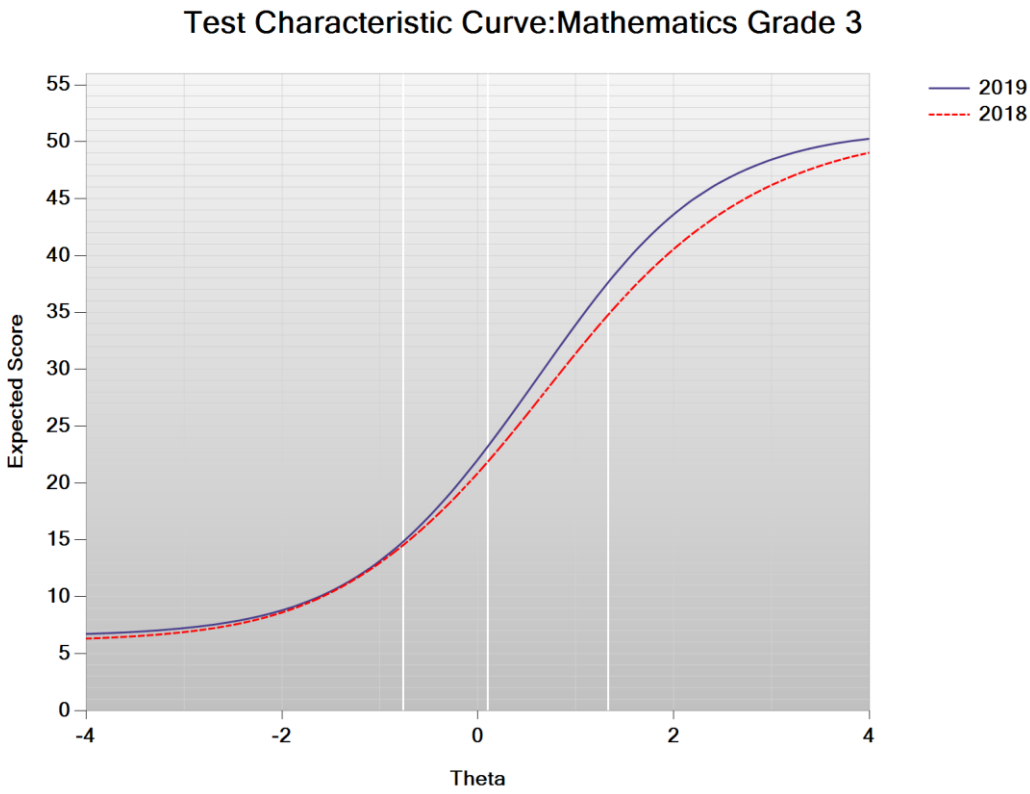
A/A Plot: Mathematics Grade 3

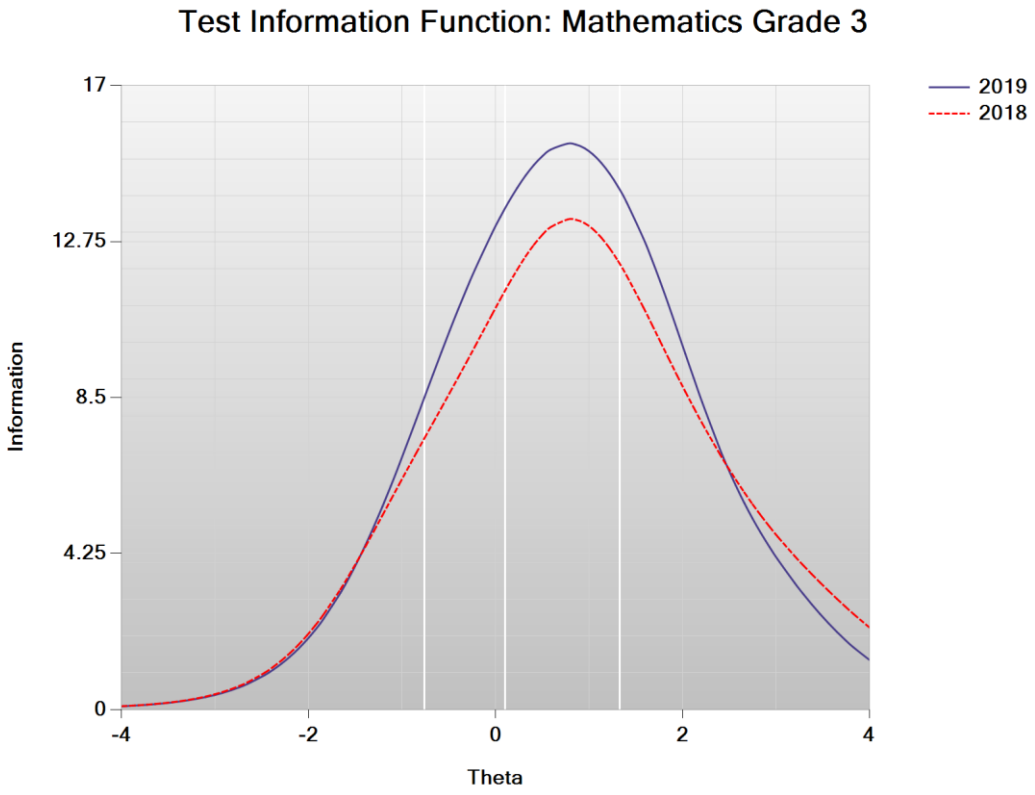


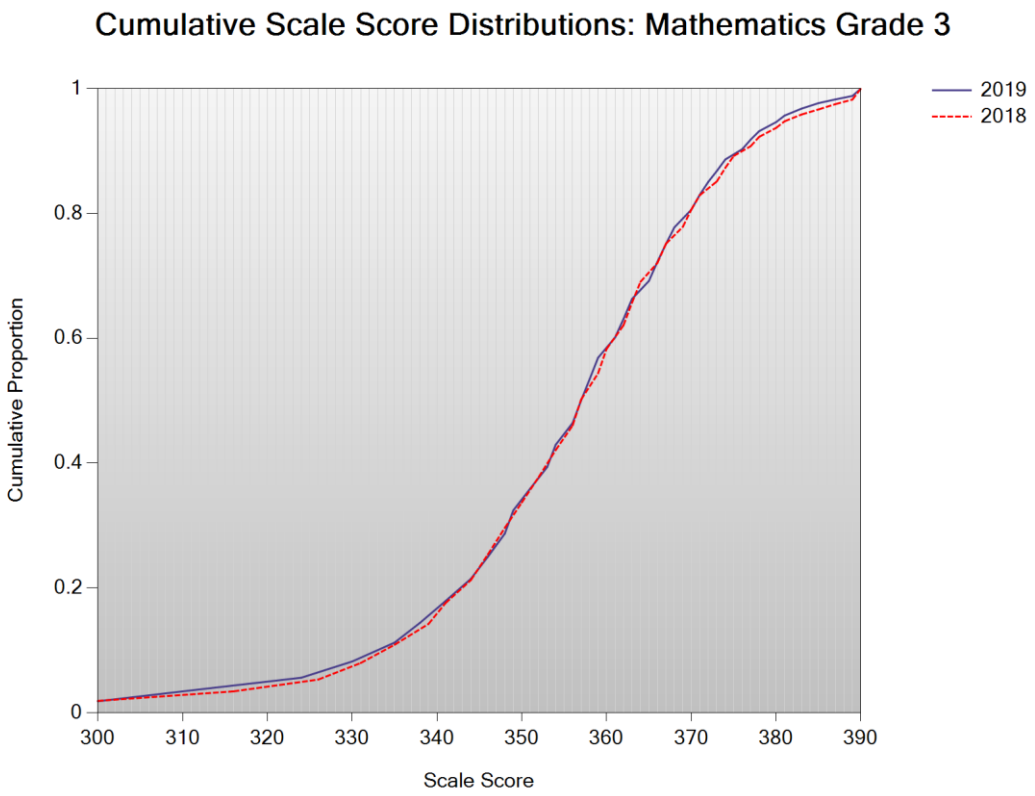
B/B Plot: Mathematics Grade 3



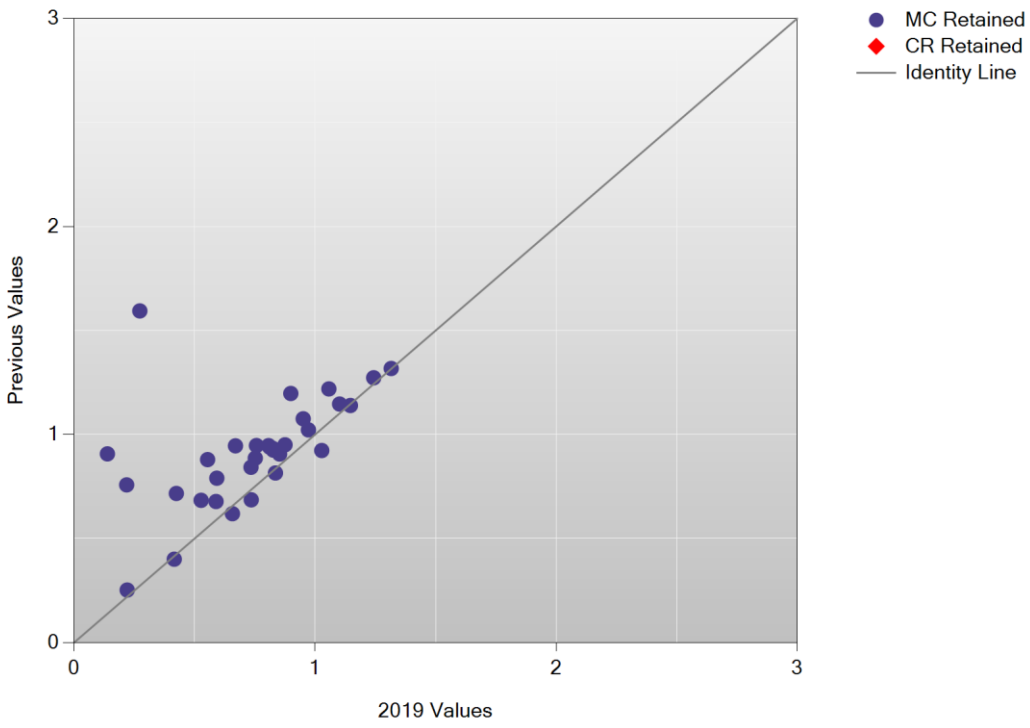

Delta Plot: Mathematics Grade 3
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line


Test Characteristic Curve:Mathematics Grade 3
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
55
-4
-2
0
2
4
2019
2018

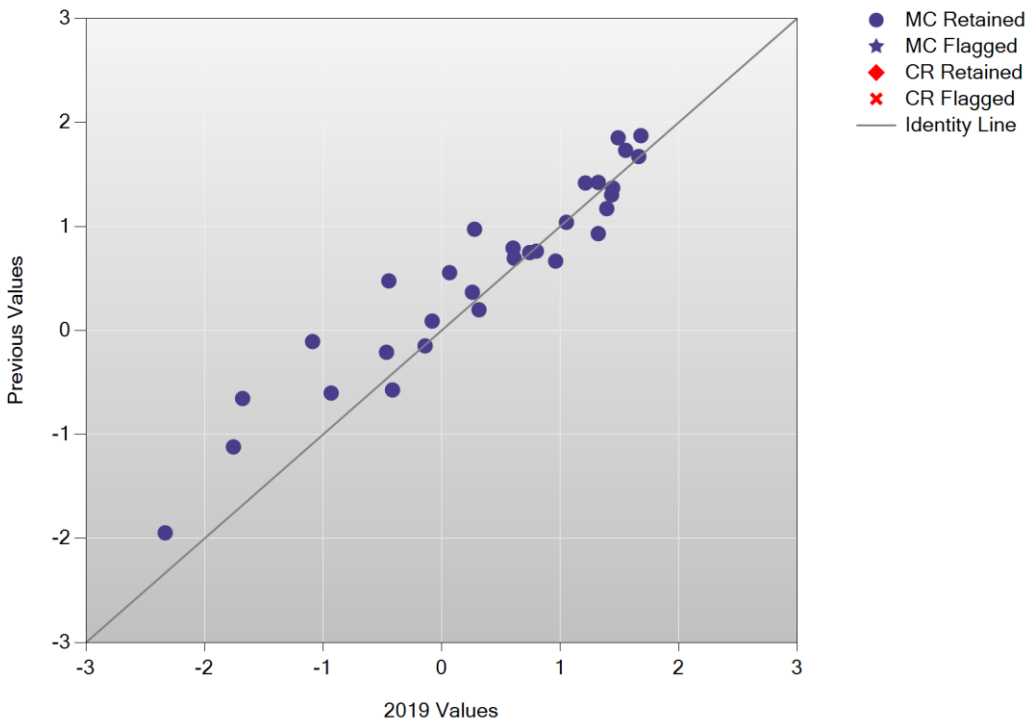

Test Information Function: Mathematics Grade 3
2019
2018
Information
17
12.75
8.5
4.25
0
-4
-2
0
2
4
Theta

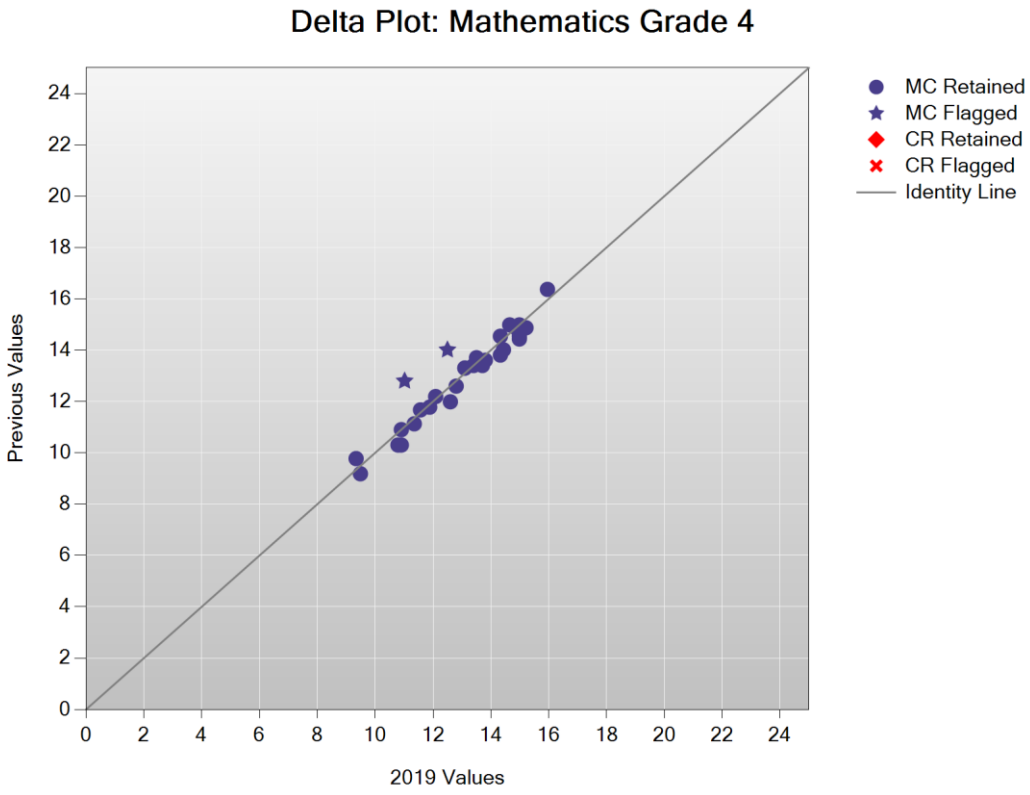

Cumulative Scale Score Distributions: Mathematics Grade 3
2019
2018
Cumulative Proportion
1
0.8
0.6
0.4
0.2
0
300
310
320
330
340
350
360
370
380
390
Scale Score

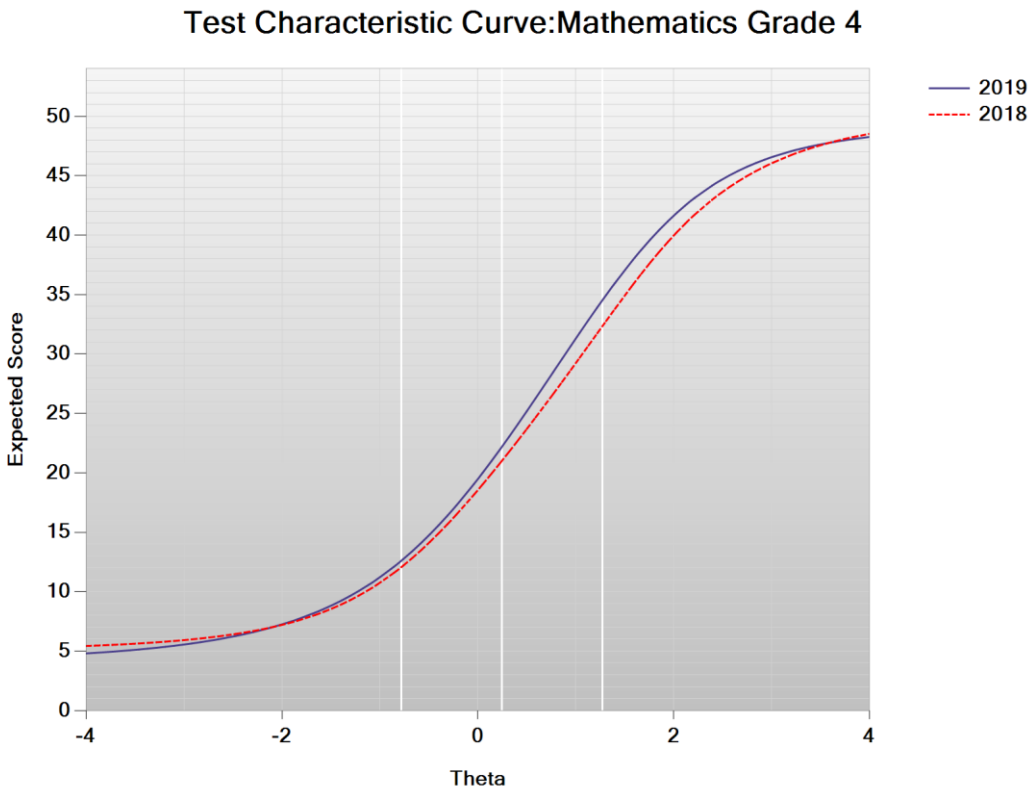
A/A Plot: Mathematics Grade 4



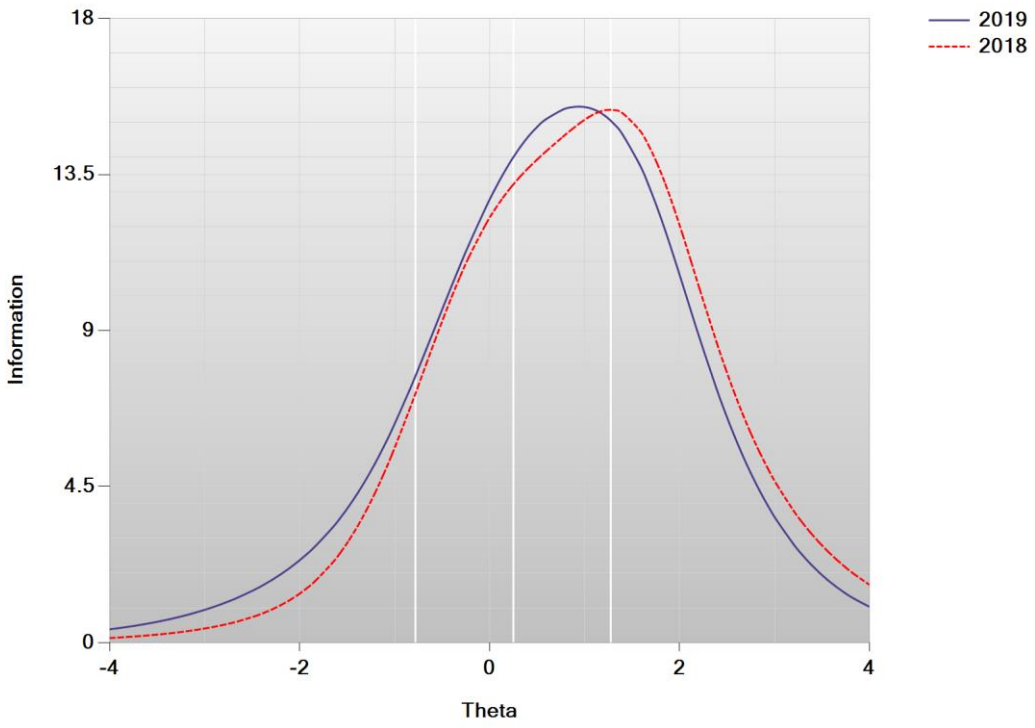
B/B Plot: Mathematics Grade 4



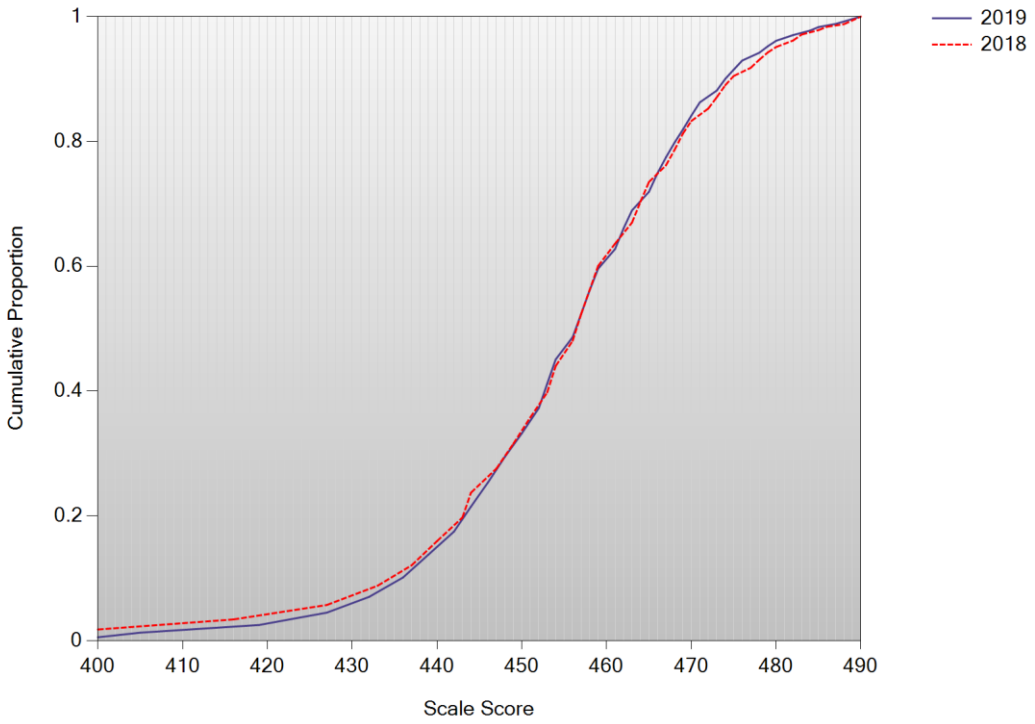

Delta Plot: Mathematics Grade 4
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line


Test Characteristic Curve:Mathematics Grade 4
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
-4
-2
0
2
4
2019
2018

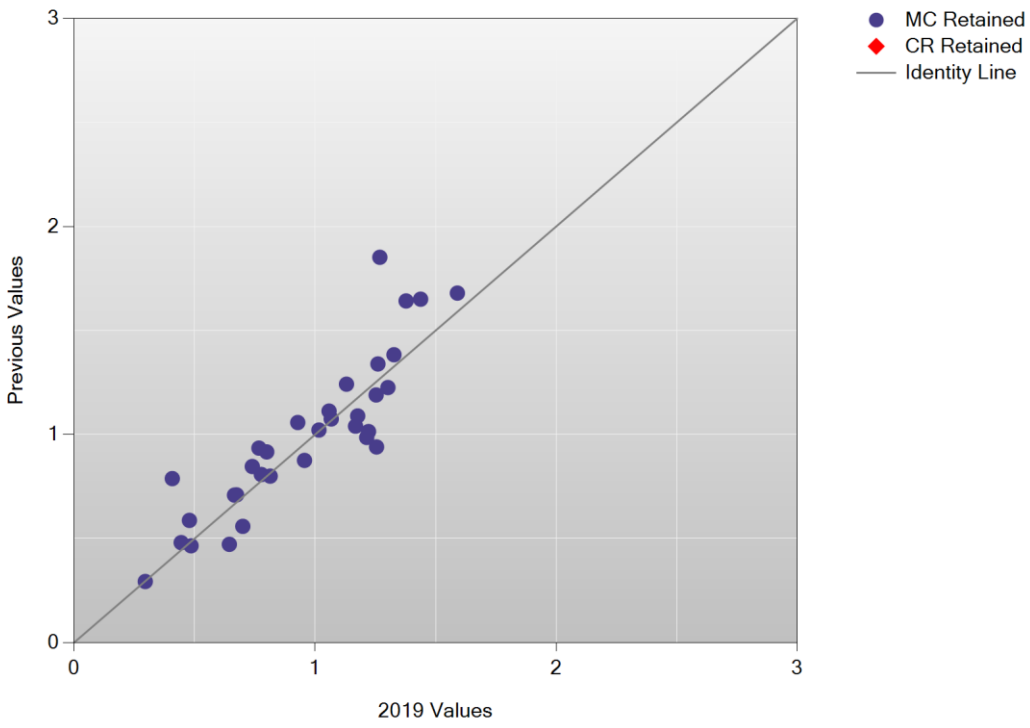
Test Information Function: Mathematics Grade 4



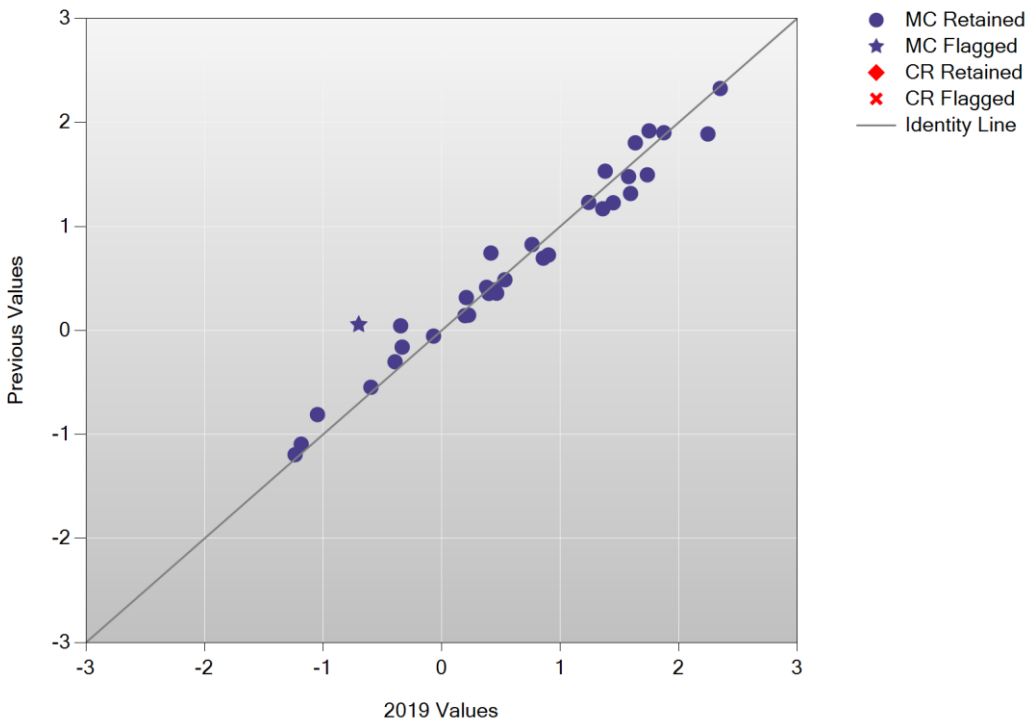
Cumulative Scale Score Distributions: Mathematics Grade 4

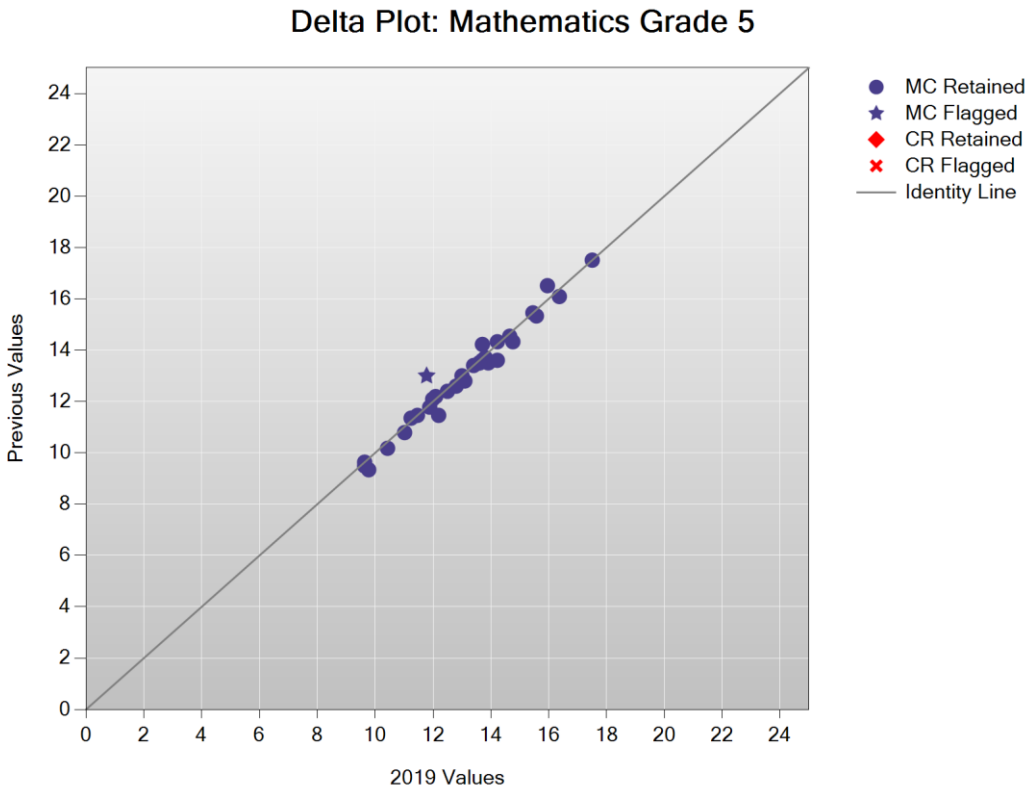


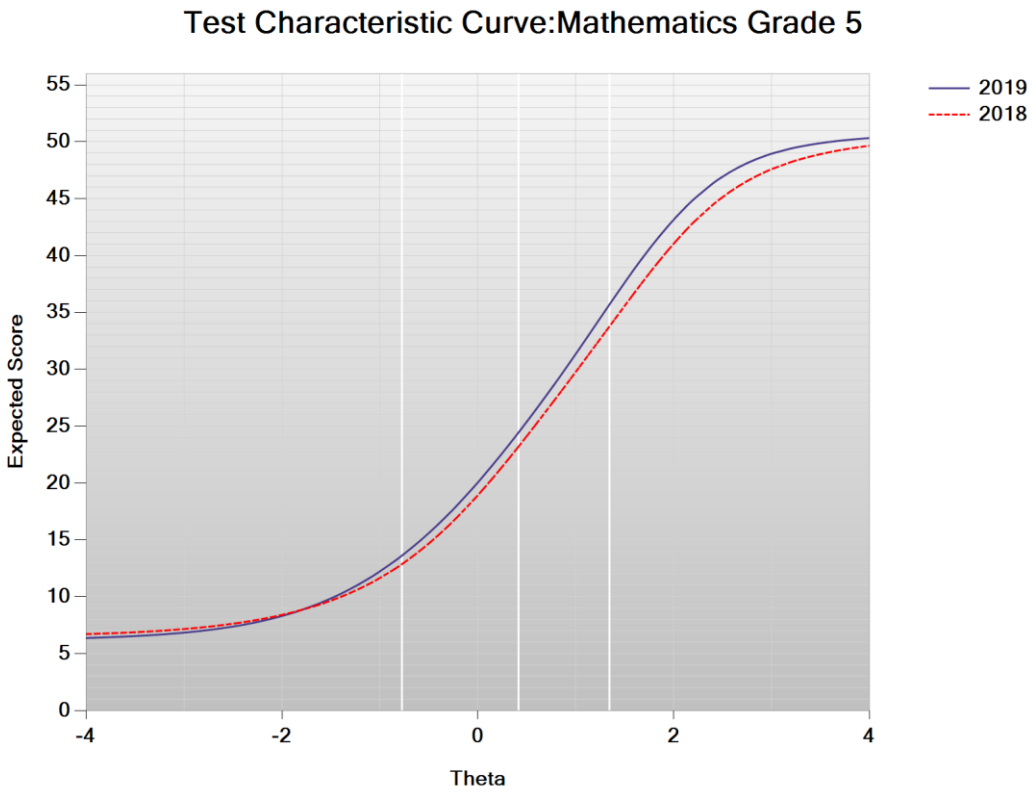
A/A Plot: Mathematics Grade 5

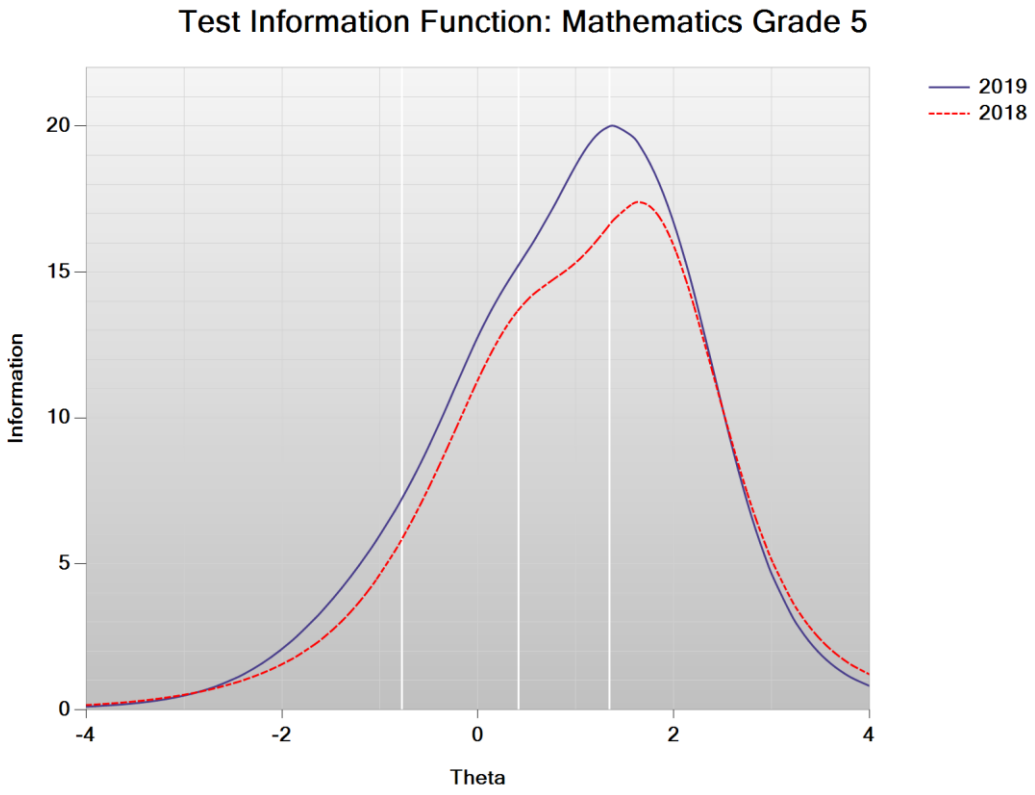


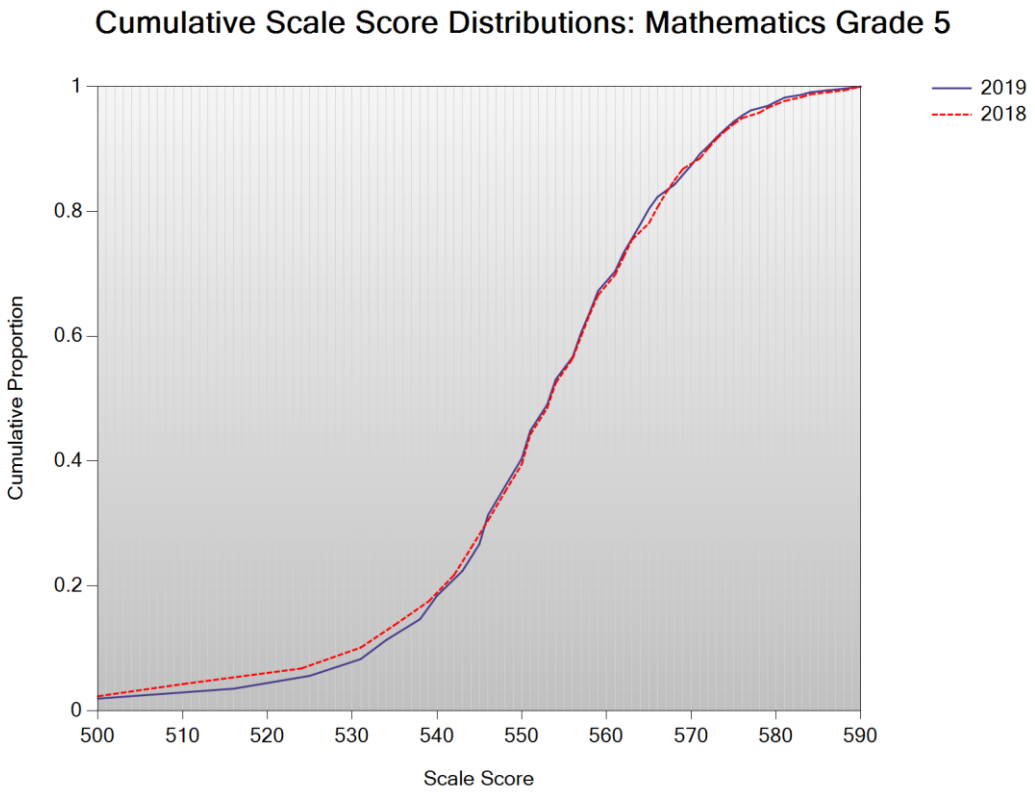
B/B Plot: Mathematics Grade 5



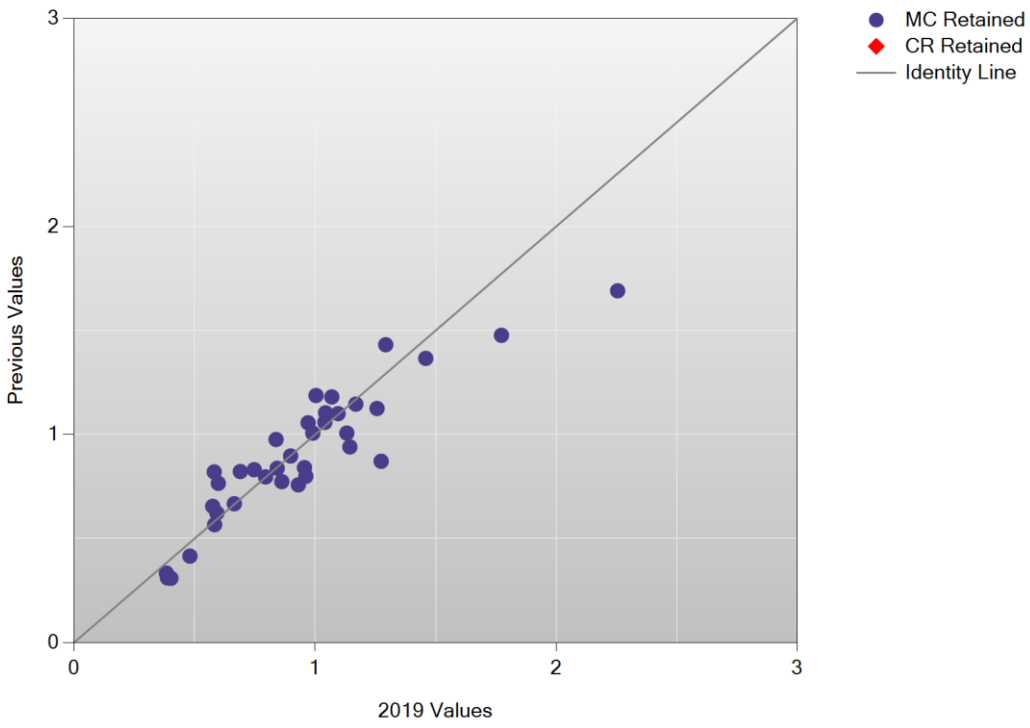

Delta Plot: Mathematics Grade 5
Previous Values
2019 Values
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line


Test Characteristic Curve:Mathematics Grade 5
Expected Score
Theta
2019
2018

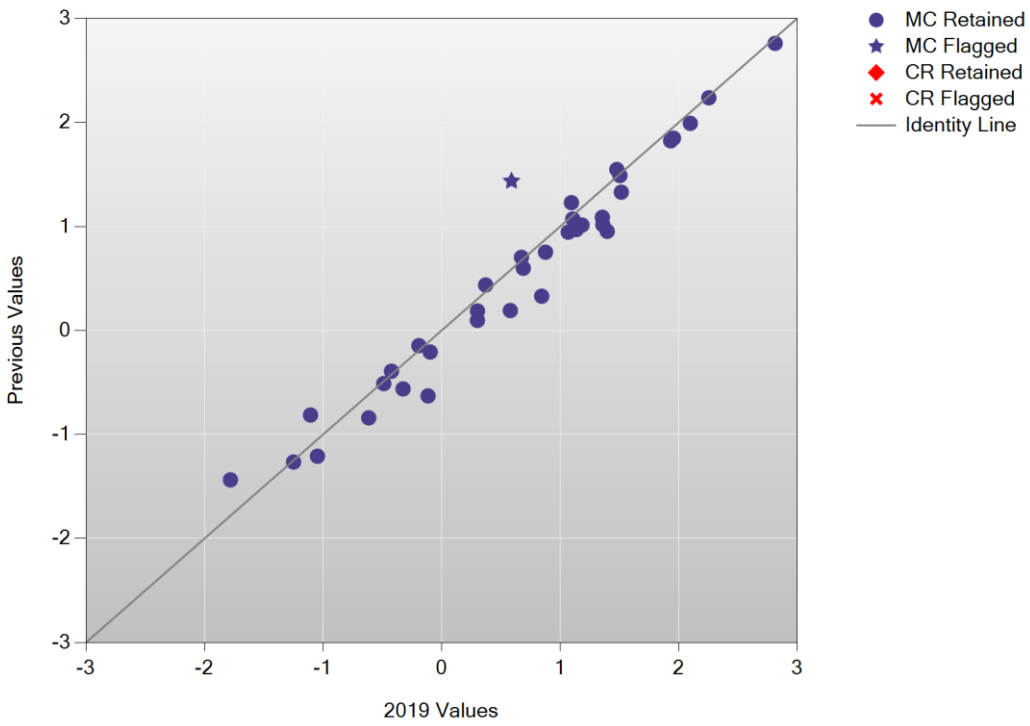

Test Information Function: Mathematics Grade 5
2019
2018
Information
20
15
10
5
0
-4
-2
0
2
4
Theta

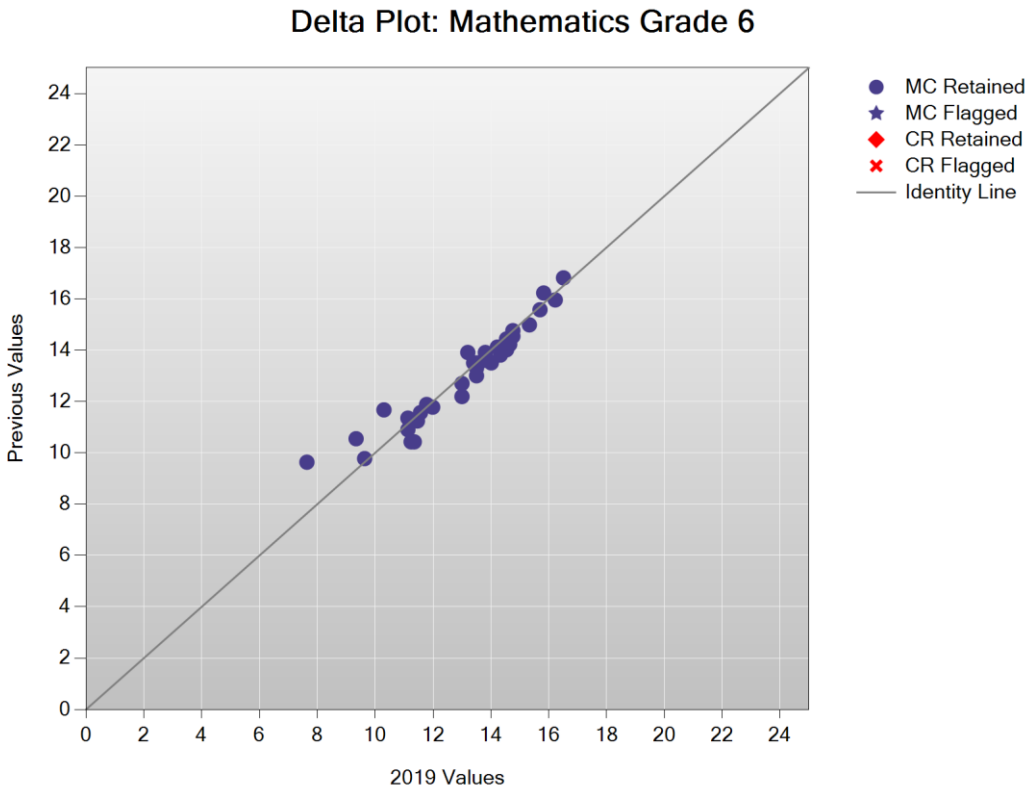

Cumulative Scale Score Distributions: Mathematics Grade 5
2019
2018
Cumulative Proportion
1
0.8
0.6
0.4
0.2
0
500
510
520
530
540
550
560
570
580
590
Scale Score

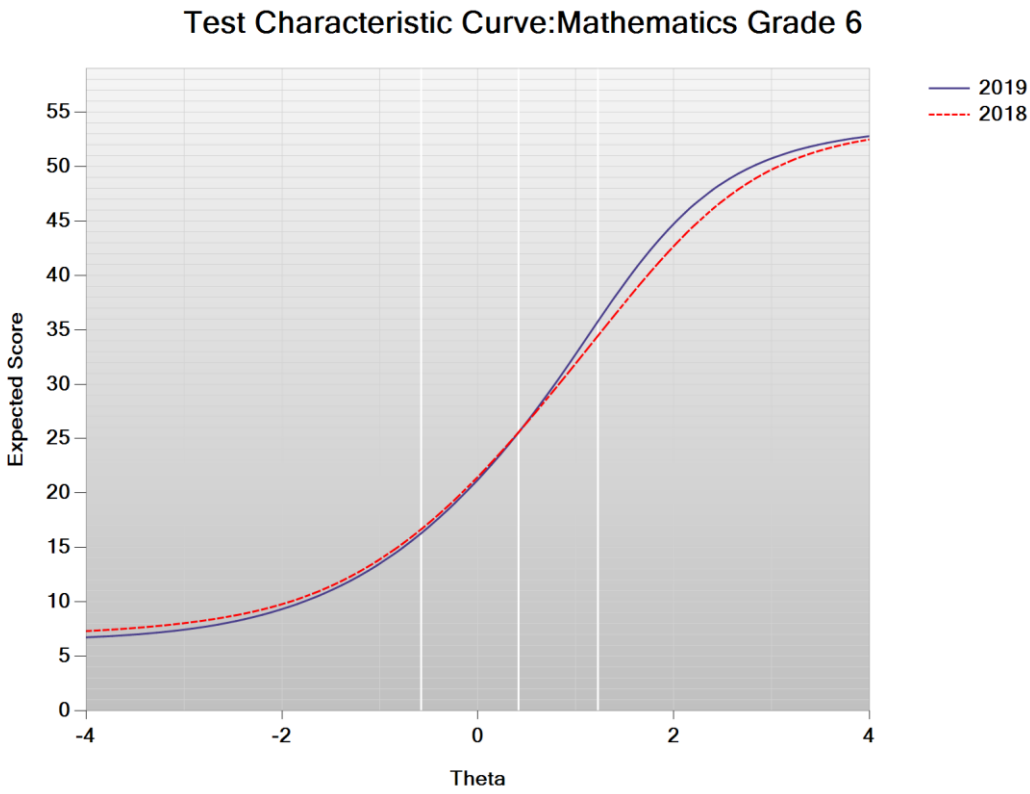
A/A Plot: Mathematics Grade 6

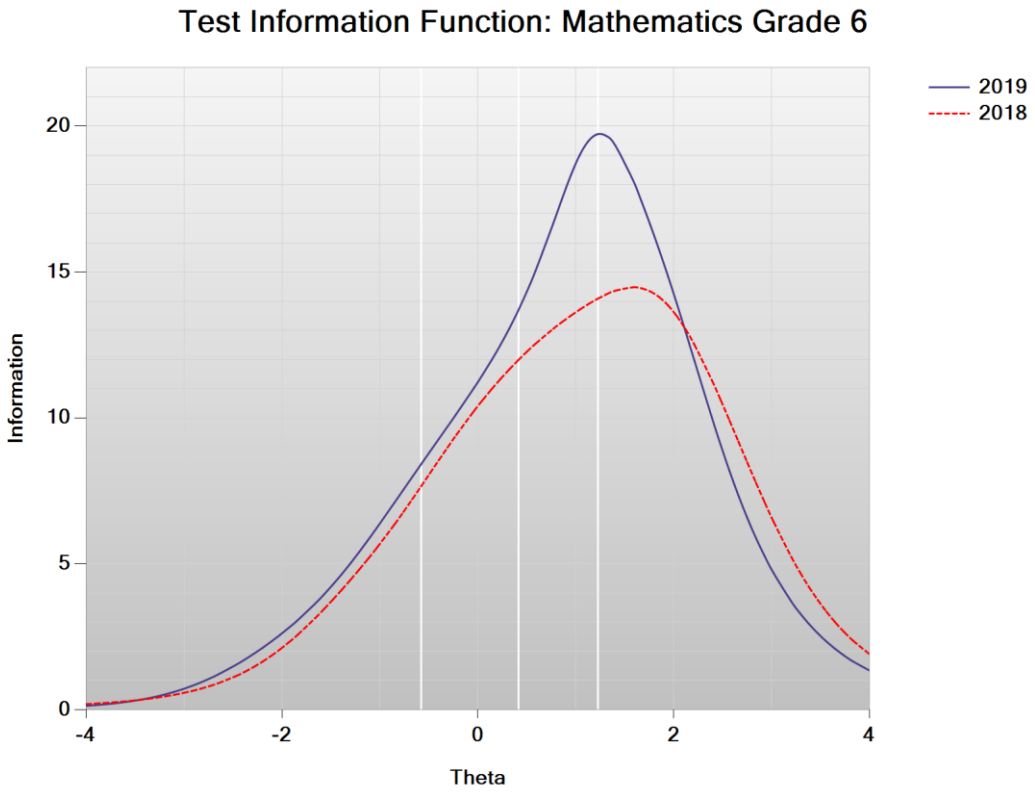


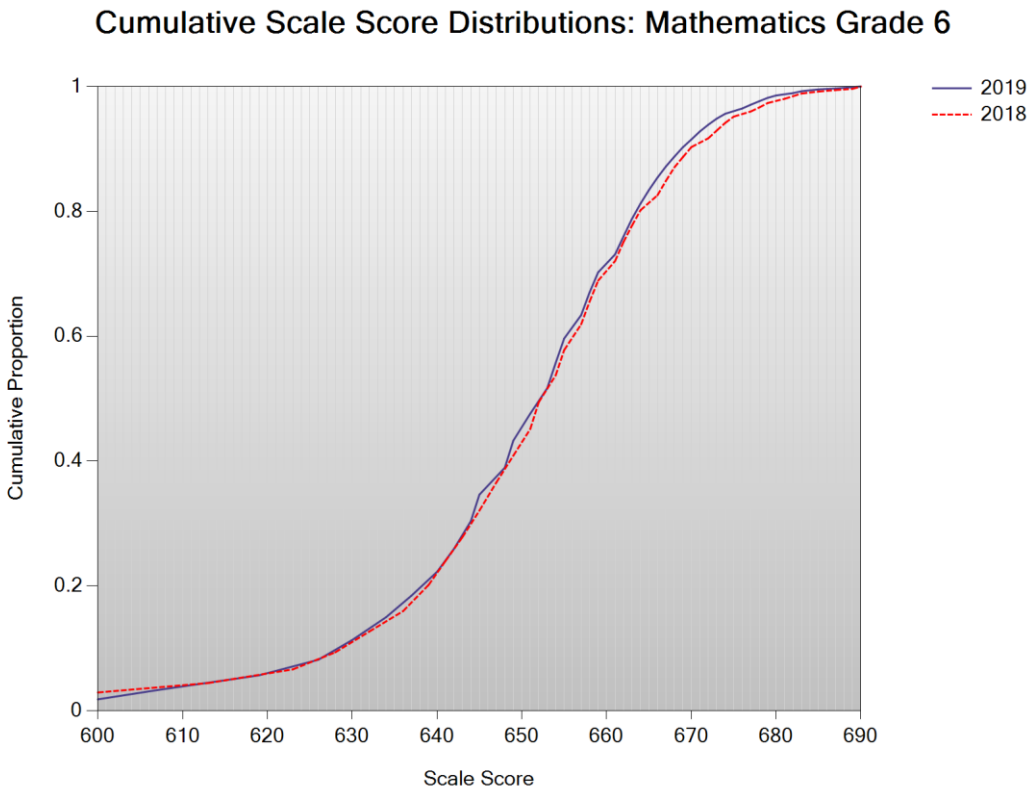
B/B Plot: Mathematics Grade 6



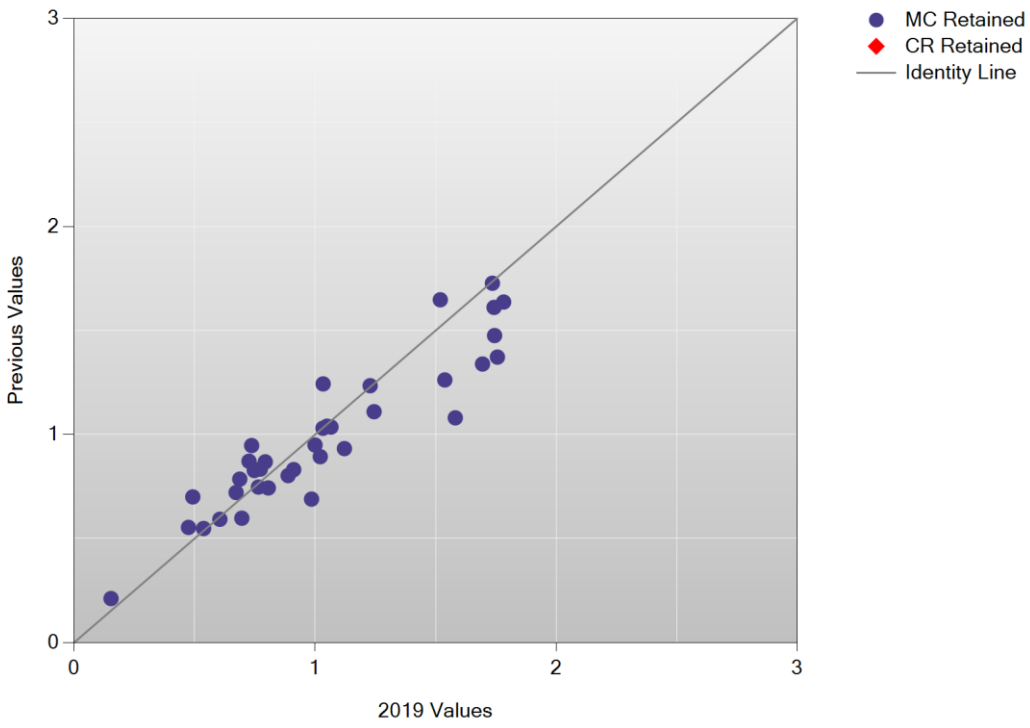

Delta Plot: Mathematics Grade 6
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24


Test Characteristic Curve:Mathematics Grade 6
2019
2018
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
55
-4
-2
0
2
4

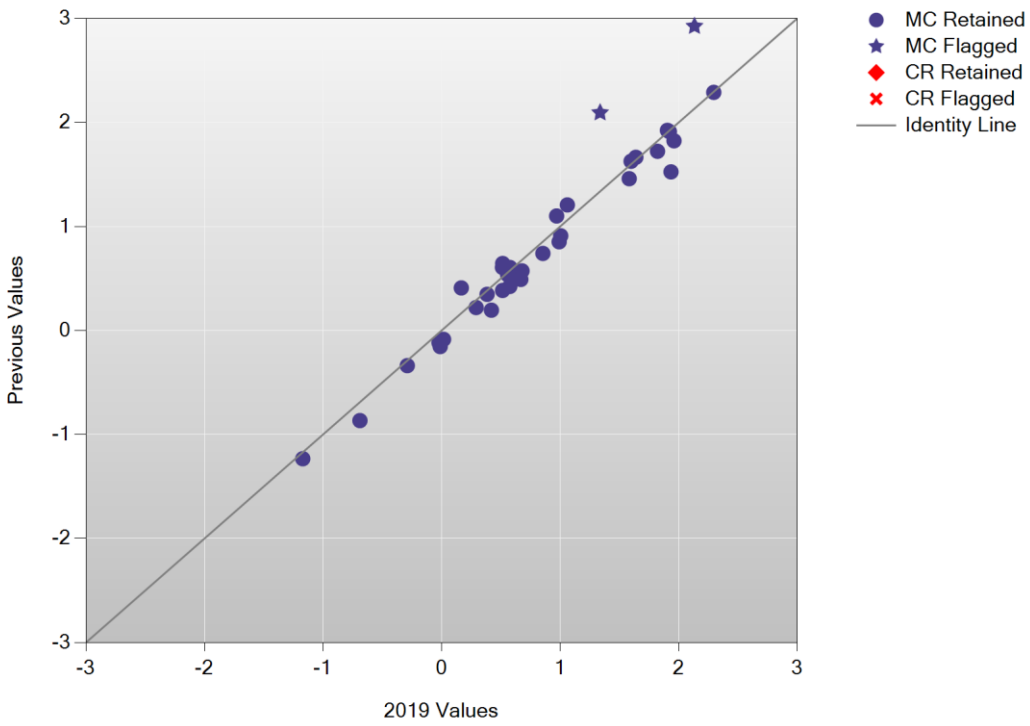

Test Information Function: Mathematics Grade 6
2019
2018
Information
20
15
10
5
0
-4
-2
0
2
4
Theta

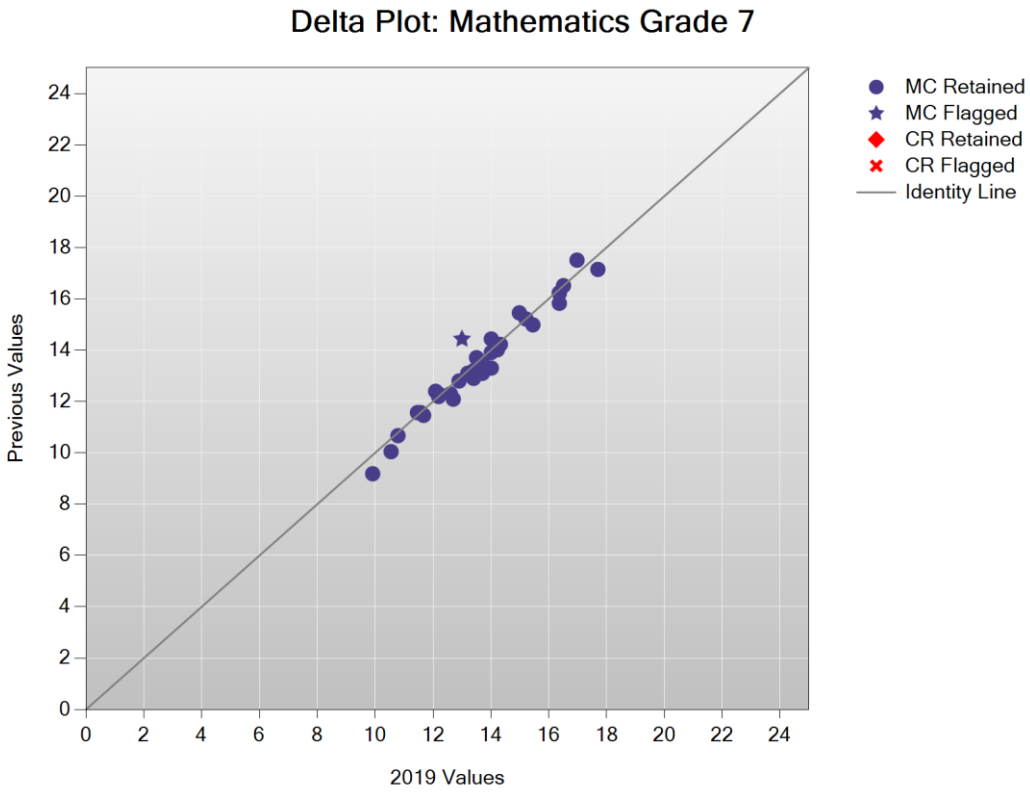

Cumulative Scale Score Distributions: Mathematics Grade 6
2019
2018
Cumulative Proportion
1
0.8
0.6
0.4
0.2
0
600
610
620
630
640
650
660
670
680
690
Scale Score

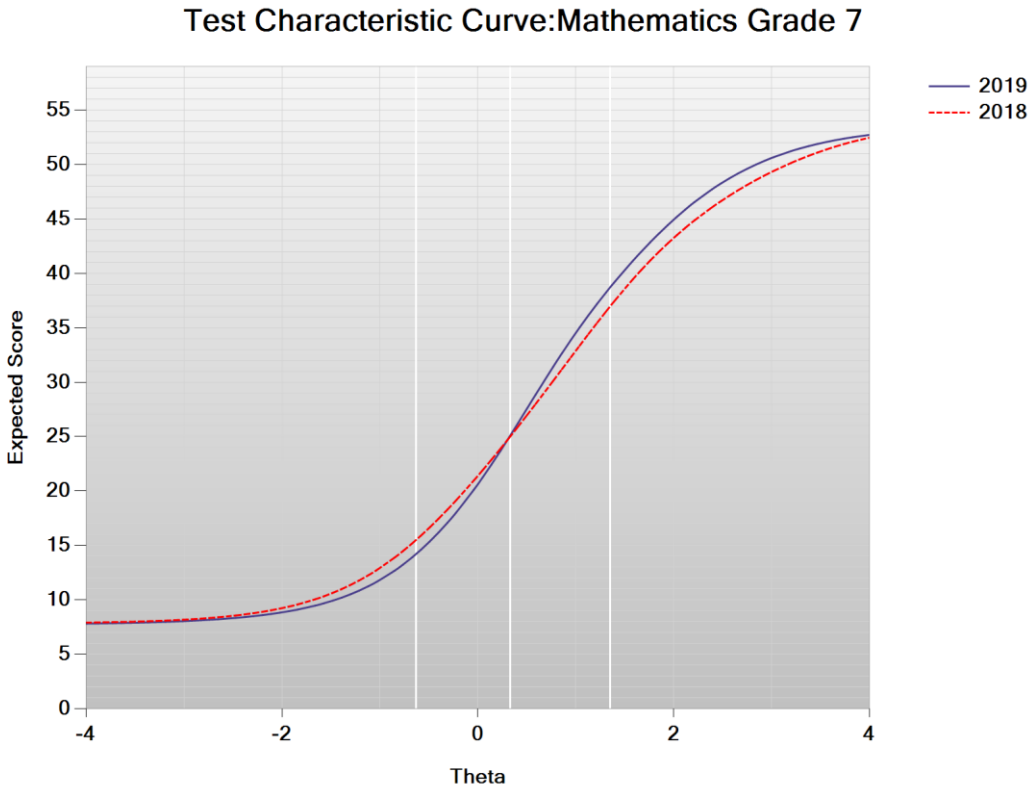
A/A Plot: Mathematics Grade 7

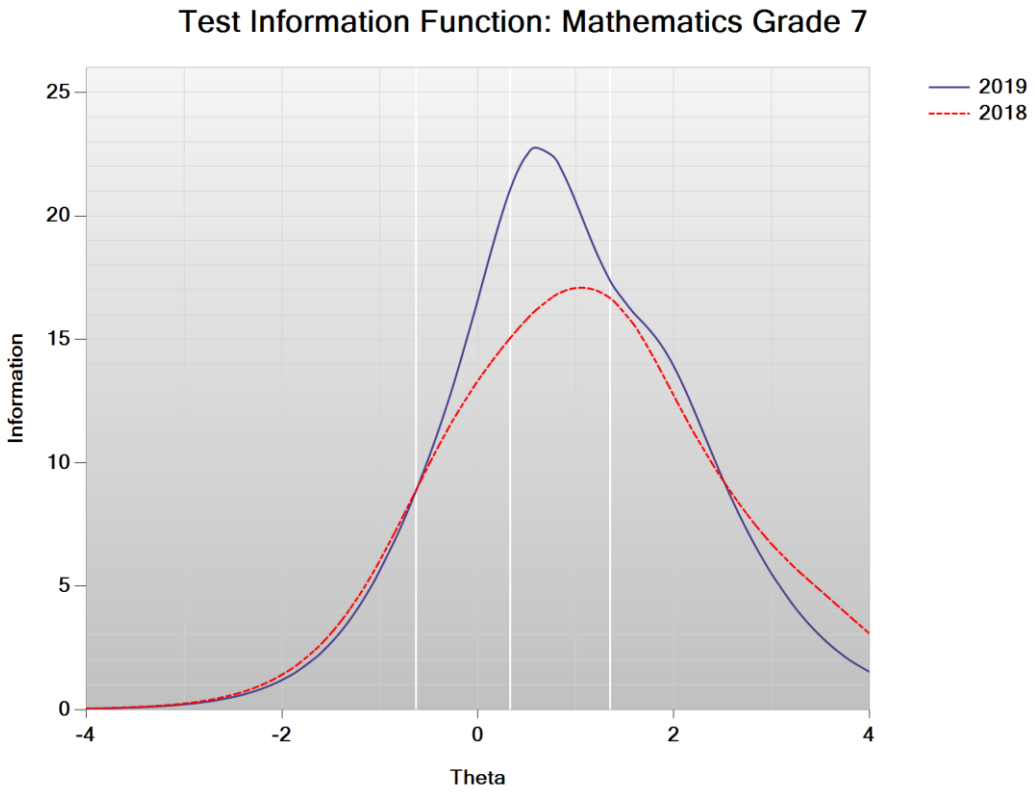


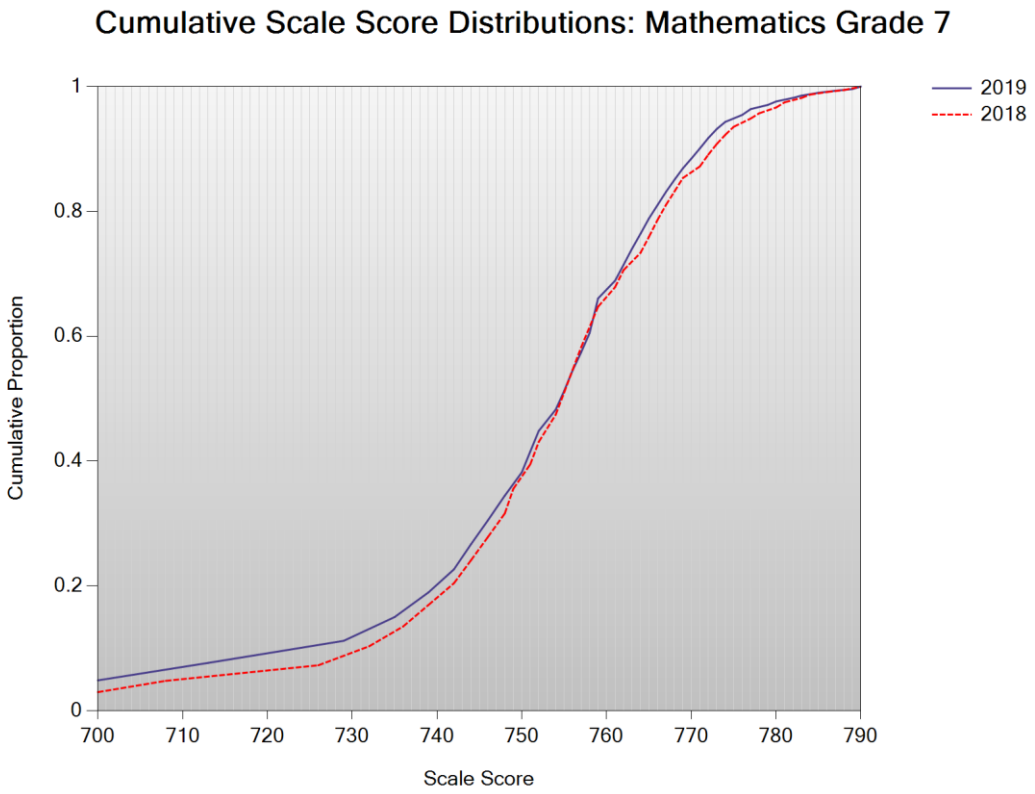
B/B Plot: Mathematics Grade 7



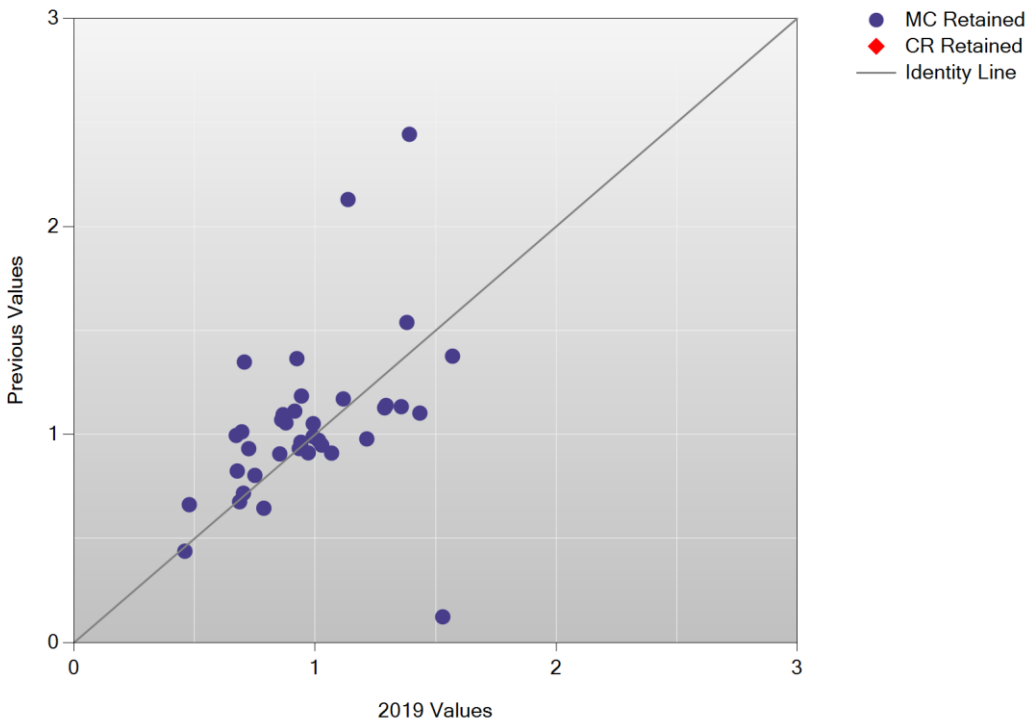

Delta Plot: Mathematics Grade 7
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line


Test Characteristic Curve:Mathematics Grade 7
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
55
-4
-2
0
2
4
2019
2018

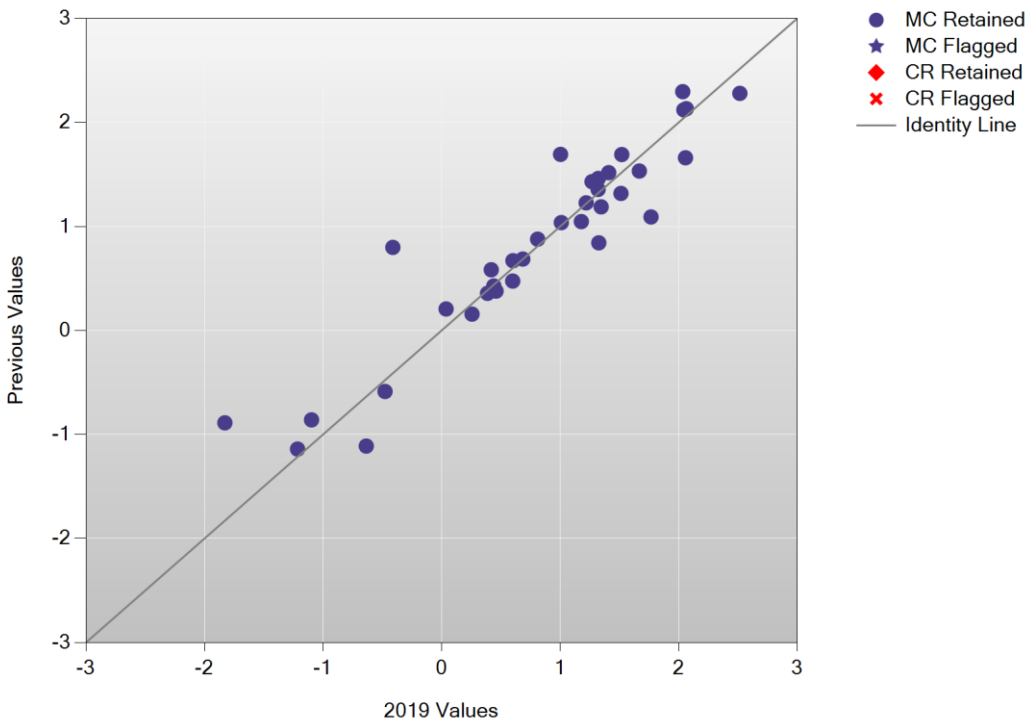

Test Information Function: Mathematics Grade 7
Information
Theta
2019
2018
25
20
15
10
5
0
-4
-2
0
2
4

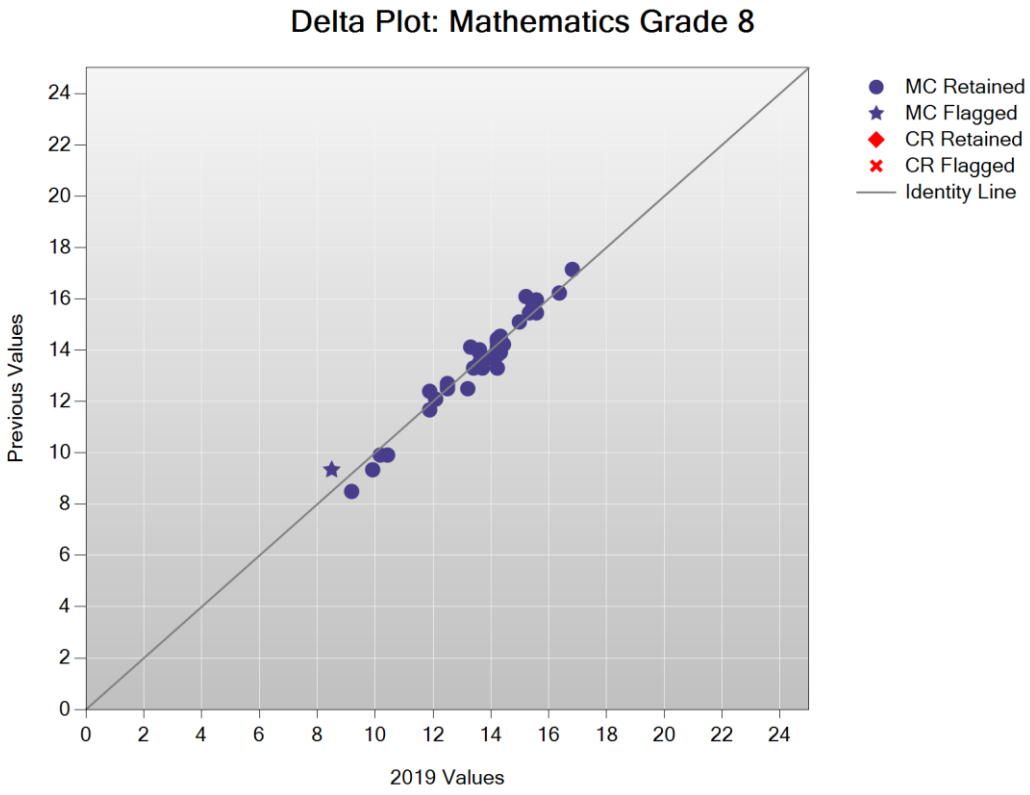

Cumulative Scale Score Distributions: Mathematics Grade 7
Cumulative Proportion
Scale Score
2019
2018
1
0.8
0.6
0.4
0.2
0
700
710
720
730
740
750
760
770
780
790

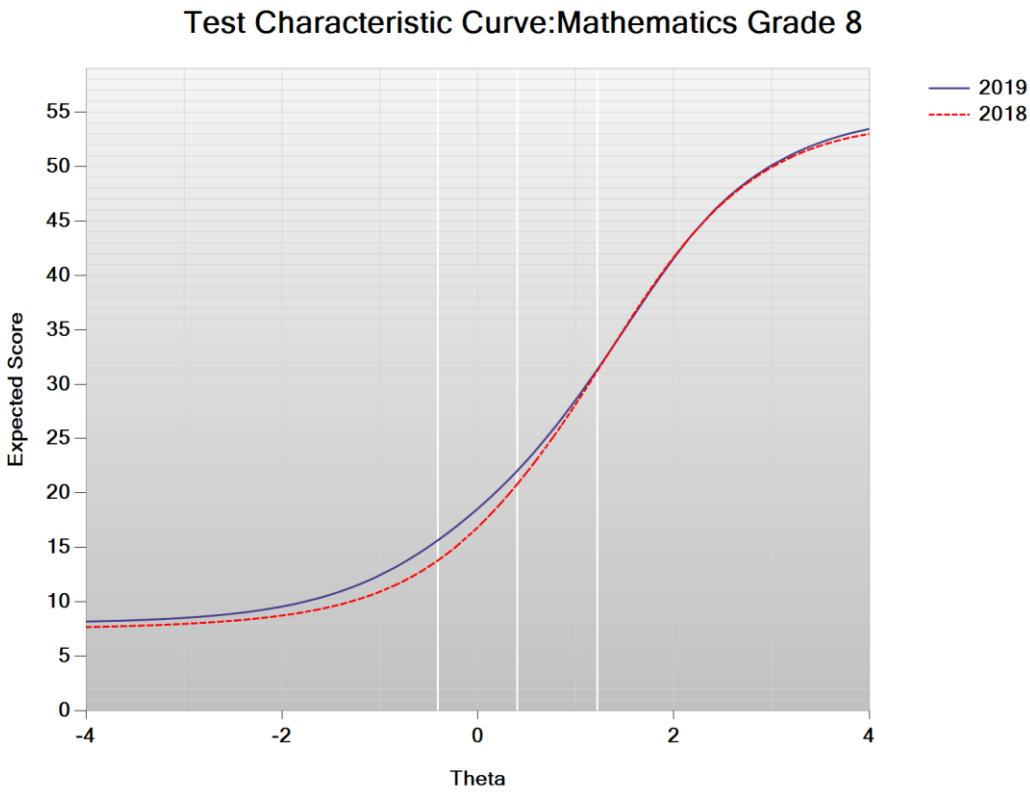
A/A Plot: Mathematics Grade 8

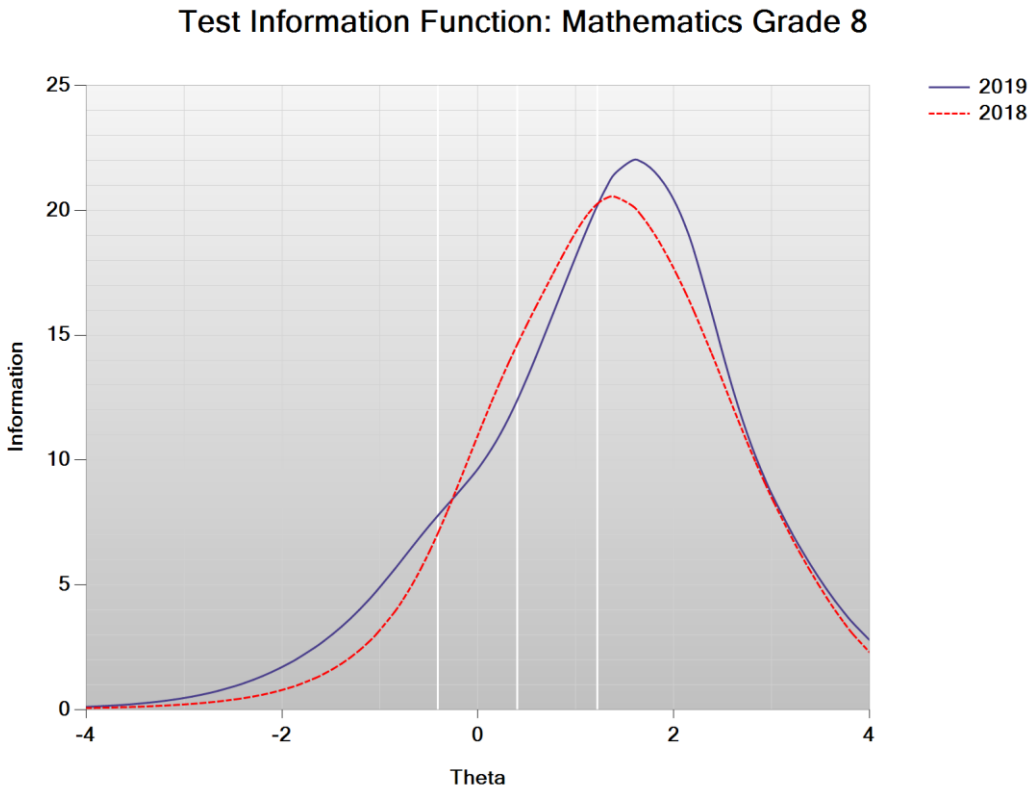


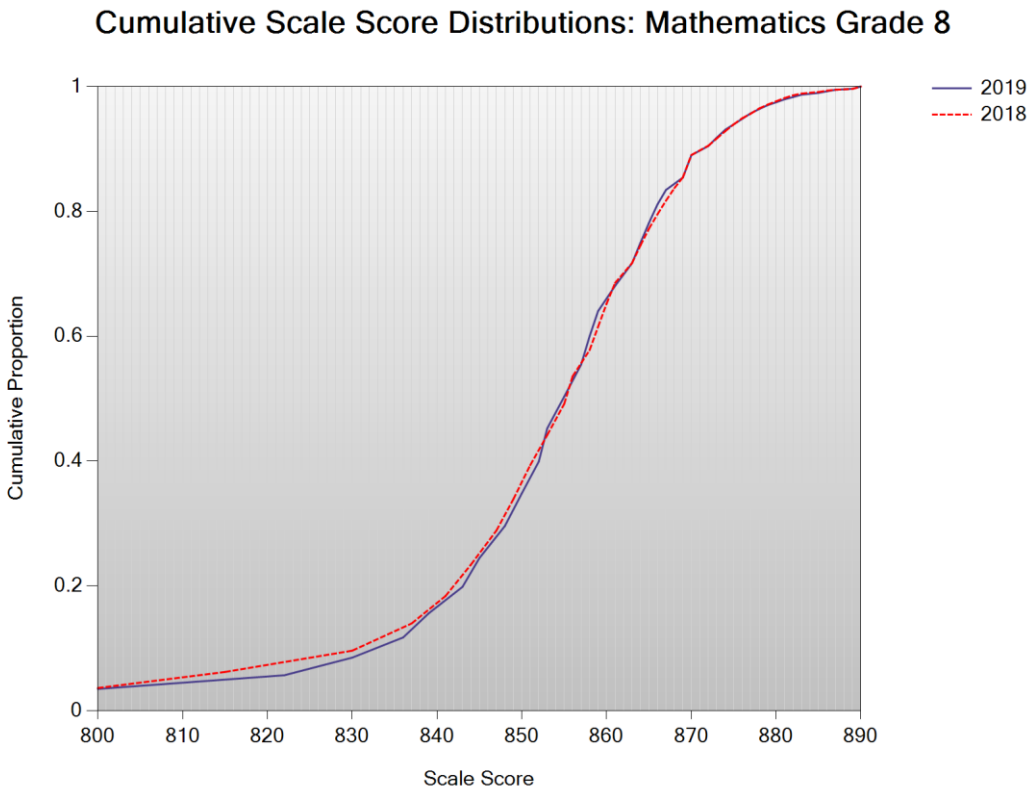
B/B Plot: Mathematics Grade 8




Delta Plot: Mathematics Grade 8
MC Retained
MC Flagged
CR Retained
CR Flagged
Identity Line
Previous Values
2019 Values
0
2
4
6
8
10
12
14
16
18
20
22
24


Test Characteristic Curve:Mathematics Grade 8
2019
2018
Expected Score
Theta
0
5
10
15
20
25
30
35
40
45
50
55
-4
-2
0
2
4


Test Information Function: Mathematics Grade 8
Information
Theta
2019
2018
25
20
15
10
5
0
-4
-2
0
2
4


Cumulative Scale Score Distributions: Mathematics Grade 8
Cumulative Proportion
Scale Score
2019
2018
1
0.8
0.6
0.4
0.2
0
800
810
820
830
840
850
860
870
880
890

Section 2.2

Lookup Tables

Table 2.2.1

Raw Score to Scale Score Lookup Table

English Language Arts Grade 3

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-11.027	0.00	10.0	300	1	300	1
1	-9.950	0.00	10.0	300	1	300	1
2	-8.873	0.00	10.0	300	1	300	1
3	-7.797	0.01	10.0	300	1	300	1
4	-6.720	0.01	10.0	300	1	300	1
5	-5.644	0.03	10.0	300	1	300	1
6	-4.567	0.11	10.0	300	1	300	1
7	-3.365	0.53	10.0	309	1	300	1
8	-2.695	1.40	10.0	319	1	314	1
9	-2.311	2.42	9.5	325	1	322	1
10	-2.039	3.50	7.9	329	1	327	1
11	-1.827	4.60	6.9	332	1	330	1
12	-1.652	5.70	6.2	335	1	333	1
13	-1.503	6.81	5.6	337	1	336	1
14	-1.371	7.91	5.2	339	1	338	1
15	-1.252	9.00	4.9	340	1	340	1
16	-1.144	10.08	4.6	342	1	342	1
17	-1.045	11.15	4.4	344	1	343	1
18	-0.951	12.19	4.2	345	1	345	1
19	-0.864	13.19	4.1	346	1	346	1
20	-0.780	14.16	3.9	347	2	346	1
21	-0.700	15.08	3.8	349	2	349	2
22	-0.623	15.94	3.7	350	2	350	2
23	-0.549	16.72	3.6	351	2	351	2
24	-0.476	17.42	3.5	352	2	352	2
25	-0.405	18.01	3.5	353	2	353	2
26	-0.335	18.50	3.4	354	2	354	2
27	-0.265	18.86	3.4	355	2	355	2
28	-0.196	19.08	3.4	356	2	357	2
29	-0.127	19.17	3.4	357	2	358	2
30	-0.058	19.11	3.4	358	2	359	2
31	0.012	18.91	3.4	359	2	359	2
32	0.083	18.58	3.4	360	3	361	3
33	0.155	18.13	3.5	361	3	362	3
34	0.229	17.60	3.5	362	3	363	3
35	0.304	16.99	3.6	363	3	364	3
36	0.381	16.35	3.6	365	3	365	3
37	0.461	15.68	3.7	366	3	366	3

Table 2.2.1 (continued)
Raw Score to Scale Score Lookup Table
English Language Arts Grade 3

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	0.543	15.02	3.8	367	3	367	3
39	0.628	14.37	3.9	368	3	368	3
40	0.716	13.74	4.0	370	3	369	3
41	0.807	13.14	4.1	370	3	370	3
42	0.902	12.56	4.2	372	4	370	3
43	1.000	11.99	4.3	374	4	373	4
44	1.102	11.42	4.4	375	4	374	4
45	1.210	10.84	4.5	377	4	375	4
46	1.323	10.23	4.6	378	4	376	4
47	1.442	9.60	4.8	380	4	378	4
48	1.568	8.93	4.9	382	4	379	4
49	1.704	8.23	5.1	384	4	381	4
50	1.849	7.52	5.4	386	4	383	4
51	2.006	6.82	5.6	389	4	384	4
52	2.178	6.14	5.9	390	4	387	4
53	2.366	5.49	6.3	390	4	389	4
54	2.573	4.89	6.7	390	4	390	4
55	2.804	4.31	7.1	390	4	390	4
56	3.066	3.73	7.6	390	4	390	4
57	3.371	3.11	8.4	390	4	390	4
58	3.745	2.42	9.5	390	4	390	4
59	4.000	2.02	10.0	390	4	390	4
60	4.000	2.02	10.0	390	4	390	4
61	4.000	2.02	10.0	390	4	390	4
62	N/A	N/A	N/A	N/A	N/A	390	4
63	N/A	N/A	N/A	N/A	N/A	390	4
64	N/A	N/A	N/A	N/A	N/A	390	4
65	N/A	N/A	N/A	N/A	N/A	390	4

Table 2.2.2

Raw Score to Scale Score Lookup Table

English Language Arts Grade 4

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-8.543	0.02	10.0	400	1	400	1
1	-7.743	0.03	10.0	400	1	400	1
2	-6.943	0.05	10.0	400	1	400	1
3	-6.142	0.10	10.0	400	1	400	1
4	-5.342	0.19	10.0	400	1	400	1
5	-4.542	0.35	10.0	400	1	400	1
6	-3.655	0.71	10.0	405	1	400	1
7	-2.961	1.26	10.0	416	1	405	1
8	-2.529	1.93	10.0	422	1	414	1
9	-2.220	2.80	9.0	427	1	419	1
10	-1.982	3.89	7.6	430	1	423	1
11	-1.789	5.15	6.6	433	1	427	1
12	-1.627	6.47	5.9	436	1	430	1
13	-1.486	7.77	5.4	438	1	433	1
14	-1.361	9.00	5.0	440	1	435	1
15	-1.248	10.12	4.7	441	1	437	1
16	-1.143	11.13	4.5	443	1	439	1
17	-1.045	12.04	4.3	444	1	441	1
18	-0.952	12.86	4.2	446	1	443	1
19	-0.863	13.60	4.1	447	1	444	1
20	-0.779	14.28	4.0	448	1	446	1
21	-0.697	14.89	3.9	450	2	447	1
22	-0.618	15.45	3.8	451	2	448	1
23	-0.540	15.93	3.8	452	2	450	2
24	-0.465	16.34	3.7	453	2	451	2
25	-0.390	16.68	3.7	454	2	452	2
26	-0.317	16.94	3.7	455	2	454	2
27	-0.244	17.12	3.6	457	2	455	2
28	-0.171	17.21	3.6	458	2	456	2
29	-0.099	17.22	3.6	459	2	457	2
30	-0.027	17.14	3.6	459	2	458	2
31	0.046	16.99	3.7	461	3	459	2
32	0.120	16.76	3.7	462	3	461	3
33	0.194	16.46	3.7	463	3	462	3
34	0.270	16.10	3.8	464	3	463	3
35	0.347	15.69	3.8	465	3	464	3
36	0.425	15.24	3.9	467	3	465	3
37	0.506	14.78	3.9	468	3	466	3

Table 2.2.2 (continued)
Raw Score to Scale Score Lookup Table
English Language Arts Grade 4

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	0.588	14.30	4.0	469	3	468	3
39	0.672	13.84	4.0	470	3	469	3
40	0.759	13.41	4.1	472	3	470	3
41	0.849	13.01	4.2	473	3	471	3
42	0.941	12.66	4.2	474	4	473	3
43	1.036	12.36	4.3	476	4	474	4
44	1.133	12.10	4.3	477	4	475	4
45	1.234	11.84	4.4	479	4	477	4
46	1.339	11.55	4.4	480	4	478	4
47	1.448	11.18	4.5	482	4	480	4
48	1.562	10.70	4.6	484	4	481	4
49	1.682	10.06	4.7	486	4	483	4
50	1.812	9.26	4.9	488	4	484	4
51	1.952	8.33	5.2	490	4	486	4
52	2.106	7.32	5.6	490	4	488	4
53	2.279	6.27	6.0	490	4	490	4
54	2.474	5.26	6.6	490	4	490	4
55	2.700	4.34	7.2	490	4	490	4
56	2.965	3.54	8.0	490	4	490	4
57	3.282	2.85	8.9	490	4	490	4
58	3.676	2.18	10.0	490	4	490	4
59	4.000	1.72	10.0	490	4	490	4
60	4.000	1.72	10.0	490	4	490	4
61	4.000	1.72	10.0	490	4	490	4
62	N/A	N/A	N/A	N/A	N/A	490	4
63	N/A	N/A	N/A	N/A	N/A	490	4
64	N/A	N/A	N/A	N/A	N/A	490	4
65	N/A	N/A	N/A	N/A	N/A	490	4

Table 2.2.3
Raw Score to Scale Score Lookup Table
English Language Arts Grade 5

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-10.873	0.00	10.0	500	1	500	1
1	-9.904	0.00	10.0	500	1	500	1
2	-8.935	0.00	10.0	500	1	500	1
3	-7.966	0.01	10.0	500	1	500	1
4	-6.997	0.02	10.0	500	1	500	1
5	-6.027	0.04	10.0	500	1	500	1
6	-5.058	0.08	10.0	500	1	500	1
7	-4.089	0.23	10.0	500	1	500	1
8	-3.077	0.81	10.0	514	1	511	1
9	-2.588	1.70	10.0	521	1	518	1
10	-2.273	2.79	9.0	526	1	523	1
11	-2.039	3.99	7.6	530	1	526	1
12	-1.850	5.20	6.6	532	1	530	1
13	-1.691	6.38	6.0	535	1	532	1
14	-1.552	7.50	5.5	537	1	535	1
15	-1.428	8.54	5.2	539	1	537	1
16	-1.313	9.49	4.9	541	1	539	1
17	-1.207	10.36	4.7	542	1	540	1
18	-1.107	11.13	4.5	544	1	542	1
19	-1.012	11.81	4.4	545	1	544	1
20	-0.921	12.40	4.3	546	1	545	1
21	-0.833	12.89	4.2	548	1	546	1
22	-0.748	13.30	4.1	549	2	548	1
23	-0.664	13.61	4.1	550	2	549	2
24	-0.582	13.85	4.1	552	2	550	2
25	-0.501	14.00	4.0	553	2	551	2
26	-0.420	14.09	4.0	554	2	552	2
27	-0.339	14.11	4.0	555	2	554	2
28	-0.259	14.07	4.0	556	2	555	2
29	-0.179	14.00	4.0	558	2	556	2
30	-0.098	13.89	4.0	559	2	557	2
31	-0.017	13.77	4.1	560	3	558	2
32	0.065	13.63	4.1	561	3	559	2
33	0.148	13.50	4.1	563	3	560	3
34	0.231	13.37	4.1	564	3	561	3
35	0.316	13.25	4.1	565	3	562	3
36	0.401	13.13	4.2	566	3	563	3
37	0.488	13.00	4.2	568	3	565	3

Table 2.2.3 (continued)
Raw Score to Scale Score Lookup Table
English Language Arts Grade 5

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	0.576	12.87	4.2	569	3	566	3
39	0.665	12.71	4.2	570	3	567	3
40	0.756	12.52	4.3	572	3	568	3
41	0.849	12.28	4.3	573	3	569	3
42	0.945	11.99	4.4	575	3	571	3
43	1.043	11.63	4.4	575	3	572	3
44	1.145	11.21	4.5	578	4	573	3
45	1.252	10.73	4.6	579	4	574	3
46	1.363	10.18	4.7	581	4	575	3
47	1.480	9.57	4.9	583	4	577	4
48	1.604	8.92	5.1	585	4	579	4
49	1.736	8.24	5.3	587	4	580	4
50	1.878	7.55	5.5	589	4	582	4
51	2.032	6.86	5.8	590	4	584	4
52	2.199	6.18	6.1	590	4	585	4
53	2.383	5.54	6.4	590	4	587	4
54	2.586	4.93	6.8	590	4	589	4
55	2.814	4.36	7.2	590	4	590	4
56	3.074	3.80	7.7	590	4	590	4
57	3.379	3.18	8.5	590	4	590	4
58	3.758	2.43	9.7	590	4	590	4
59	4.000	1.98	10.0	590	4	590	4
60	4.000	1.98	10.0	590	4	590	4
61	4.000	1.98	10.0	590	4	590	4
62	N/A	N/A	N/A	N/A	N/A	590	4
63	N/A	N/A	N/A	N/A	N/A	590	4
64	N/A	N/A	N/A	N/A	N/A	590	4
65	N/A	N/A	N/A	N/A	N/A	590	4

Table 2.2.4
Raw Score to Scale Score Lookup Table
English Language Arts Grade 6

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-9.055	0.01	10.0	600	1	600	1
1	-8.356	0.01	10.0	600	1	600	1
2	-7.658	0.02	10.0	600	1	600	1
3	-6.959	0.03	10.0	600	1	600	1
4	-6.260	0.06	10.0	600	1	600	1
5	-5.561	0.12	10.0	600	1	600	1
6	-4.862	0.23	10.0	600	1	600	1
7	-4.164	0.47	10.0	600	1	602	1
8	-3.360	1.06	10.0	609	1	611	1
9	-2.854	1.73	10.0	617	1	617	1
10	-2.504	2.40	9.4	622	1	621	1
11	-2.234	3.08	8.3	626	1	625	1
12	-2.012	3.76	7.5	629	1	628	1
13	-1.825	4.48	6.9	632	1	630	1
14	-1.661	5.22	6.4	634	1	632	1
15	-1.515	5.99	6.0	636	1	634	1
16	-1.382	6.77	5.6	638	1	636	1
17	-1.261	7.55	5.3	640	1	638	1
18	-1.149	8.33	5.1	642	1	639	1
19	-1.043	9.07	4.9	643	1	641	1
20	-0.944	9.78	4.7	645	2	642	1
21	-0.849	10.44	4.5	646	2	643	1
22	-0.758	11.03	4.4	647	2	645	2
23	-0.670	11.56	4.3	649	2	646	2
24	-0.585	12.01	4.2	650	2	647	2
25	-0.502	12.39	4.2	651	2	649	2
26	-0.420	12.70	4.1	652	2	650	2
27	-0.340	12.95	4.1	654	2	651	2
28	-0.260	13.13	4.0	655	2	652	2
29	-0.181	13.26	4.0	656	2	654	2
30	-0.102	13.35	4.0	657	2	655	2
31	-0.024	13.40	4.0	658	2	656	2
32	0.055	13.44	4.0	659	2	657	2
33	0.133	13.46	4.0	660	3	659	2
34	0.212	13.47	4.0	662	3	659	2
35	0.291	13.49	4.0	663	3	661	3
36	0.371	13.50	4.0	664	3	662	3
37	0.452	13.52	4.0	665	3	663	3

Table 2.2.4 (continued)
Raw Score to Scale Score Lookup Table
English Language Arts Grade 6

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	0.534	13.53	4.0	666	3	665	3
39	0.616	13.52	4.0	668	3	666	3
40	0.700	13.47	4.0	669	3	667	3
41	0.785	13.37	4.0	670	3	668	3
42	0.872	13.19	4.0	671	3	669	3
43	0.961	12.94	4.1	673	3	671	3
44	1.053	12.59	4.1	674	3	672	3
45	1.149	12.15	4.2	675	4	673	3
46	1.248	11.63	4.3	677	4	674	3
47	1.351	11.04	4.4	678	4	676	4
48	1.460	10.39	4.5	680	4	677	4
49	1.576	9.70	4.7	682	4	679	4
50	1.698	8.98	4.9	683	4	680	4
51	1.830	8.25	5.1	685	4	682	4
52	1.971	7.51	5.3	687	4	684	4
53	2.124	6.79	5.6	690	4	686	4
54	2.292	6.09	5.9	690	4	687	4
55	2.477	5.41	6.3	690	4	689	4
56	2.681	4.77	6.7	690	4	690	4
57	2.910	4.16	7.2	690	4	690	4
58	3.170	3.60	7.7	690	4	690	4
59	3.470	3.08	8.3	690	4	690	4
60	3.826	2.56	9.1	690	4	690	4
61	4.000	2.32	9.6	690	4	690	4
62	4.000	2.32	9.6	690	4	690	4
63	4.000	2.32	9.6	690	4	690	4
64	N/A	N/A	N/A	N/A	N/A	690	4
65	N/A	N/A	N/A	N/A	N/A	690	4
66	N/A	N/A	N/A	N/A	N/A	690	4
67	N/A	N/A	N/A	N/A	N/A	690	4

Table 2.2.5
Raw Score to Scale Score Lookup Table
English Language Arts Grade 7

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-9.235	0.01	10.0	700	1	700	1
1	-8.483	0.01	10.0	700	1	700	1
2	-7.731	0.02	10.0	700	1	700	1
3	-6.978	0.03	10.0	700	1	700	1
4	-6.226	0.06	10.0	700	1	700	1
5	-5.474	0.10	10.0	700	1	700	1
6	-4.722	0.19	10.0	700	1	700	1
7	-3.952	0.40	10.0	701	1	700	1
8	-3.154	0.99	10.0	712	1	711	1
9	-2.693	1.75	10.0	719	1	718	1
10	-2.368	2.59	9.1	724	1	723	1
11	-2.115	3.44	7.9	728	1	727	1
12	-1.906	4.27	7.1	731	1	730	1
13	-1.726	5.06	6.5	733	1	732	1
14	-1.567	5.80	6.1	736	1	734	1
15	-1.423	6.50	5.8	738	1	737	1
16	-1.292	7.16	5.5	740	1	739	1
17	-1.170	7.79	5.3	742	1	740	1
18	-1.056	8.38	5.1	743	1	742	1
19	-0.948	8.93	4.9	744	1	744	1
20	-0.845	9.45	4.8	746	2	744	1
21	-0.747	9.94	4.7	748	2	746	2
22	-0.653	10.40	4.6	749	2	748	2
23	-0.562	10.84	4.5	750	2	749	2
24	-0.474	11.26	4.4	752	2	750	2
25	-0.389	11.66	4.3	753	2	752	2
26	-0.305	12.04	4.2	754	2	753	2
27	-0.223	12.40	4.2	755	2	754	2
28	-0.143	12.75	4.1	757	2	755	2
29	-0.064	13.09	4.1	758	2	756	2
30	0.014	13.40	4.0	759	2	758	2
31	0.091	13.70	4.0	760	3	759	2
32	0.167	13.97	3.9	761	3	759	2
33	0.243	14.21	3.9	762	3	761	3
34	0.318	14.42	3.9	763	3	762	3
35	0.394	14.59	3.8	765	3	763	3
36	0.469	14.70	3.8	766	3	764	3
37	0.545	14.76	3.8	767	3	765	3

Table 2.2.5 (continued)
Raw Score to Scale Score Lookup Table
English Language Arts Grade 7

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	0.621	14.77	3.8	768	3	766	3
39	0.698	14.71	3.8	769	3	768	3
40	0.776	14.59	3.8	770	3	769	3
41	0.855	14.41	3.9	771	3	770	3
42	0.936	14.18	3.9	772	3	771	3
43	1.018	13.89	3.9	774	3	772	3
44	1.103	13.54	4.0	775	3	773	3
45	1.190	13.15	4.0	776	4	775	3
46	1.279	12.72	4.1	778	4	775	3
47	1.373	12.24	4.2	779	4	777	4
48	1.469	11.72	4.3	780	4	778	4
49	1.571	11.15	4.4	782	4	780	4
50	1.677	10.54	4.5	783	4	781	4
51	1.790	9.88	4.7	785	4	783	4
52	1.910	9.18	4.8	787	4	784	4
53	2.038	8.45	5.1	789	4	786	4
54	2.178	7.69	5.3	790	4	788	4
55	2.330	6.90	5.6	790	4	789	4
56	2.500	6.09	6.0	790	4	790	4
57	2.691	5.26	6.4	790	4	790	4
58	2.913	4.41	7.0	790	4	790	4
59	3.180	3.54	7.8	790	4	790	4
60	3.520	2.64	9.0	790	4	790	4
61	3.999	1.67	10.0	790	4	790	4
62	4.000	1.67	10.0	790	4	790	4
63	4.000	1.67	10.0	790	4	790	4
64	N/A	N/A	N/A	N/A	N/A	790	4
65	N/A	N/A	N/A	N/A	N/A	790	4
66	N/A	N/A	N/A	N/A	N/A	790	4
67	N/A	N/A	N/A	N/A	N/A	790	4

Table 2.2.6
Raw Score to Scale Score Lookup Table
English Language Arts Grade 8

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-9.118	0.01	10.0	800	1	800	1
1	-8.334	0.01	10.0	800	1	800	1
2	-7.550	0.02	10.0	800	1	800	1
3	-6.766	0.04	10.0	800	1	800	1
4	-5.982	0.07	10.0	800	1	800	1
5	-5.198	0.13	10.0	800	1	800	1
6	-4.414	0.27	10.0	800	1	800	1
7	-3.524	0.66	10.0	807	1	810	1
8	-2.902	1.31	10.0	816	1	816	1
9	-2.505	2.08	10.0	822	1	821	1
10	-2.213	2.91	8.7	826	1	824	1
11	-1.981	3.79	7.6	830	1	827	1
12	-1.787	4.69	6.8	833	1	830	1
13	-1.621	5.62	6.2	835	1	832	1
14	-1.475	6.57	5.8	837	1	834	1
15	-1.343	7.52	5.4	839	1	836	1
16	-1.223	8.46	5.1	841	1	838	1
17	-1.112	9.36	4.8	843	1	839	1
18	-1.009	10.22	4.6	844	2	841	1
19	-0.912	11.01	4.5	846	2	842	1
20	-0.819	11.73	4.3	847	2	843	1
21	-0.731	12.37	4.2	848	2	845	2
22	-0.646	12.94	4.1	850	2	846	2
23	-0.564	13.43	4.0	851	2	847	2
24	-0.483	13.84	4.0	852	2	848	2
25	-0.405	14.19	3.9	853	2	849	2
26	-0.328	14.48	3.9	854	2	850	2
27	-0.252	14.71	3.9	855	2	852	2
28	-0.177	14.89	3.8	857	2	853	2
29	-0.103	15.01	3.8	858	2	854	2
30	-0.029	15.09	3.8	859	2	855	2
31	0.045	15.12	3.8	859	2	856	2
32	0.119	15.12	3.8	861	3	857	2
33	0.193	15.07	3.8	862	3	858	2
34	0.267	14.98	3.8	863	3	859	2
35	0.342	14.86	3.8	864	3	860	3
36	0.417	14.71	3.9	865	3	861	3
37	0.493	14.53	3.9	866	3	862	3

Table 2.2.6 (continued)
Raw Score to Scale Score Lookup Table
English Language Arts Grade 8

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	0.571	14.32	3.9	868	3	864	3
39	0.649	14.09	3.9	869	3	865	3
40	0.729	13.82	4.0	870	3	866	3
41	0.811	13.54	4.0	871	3	867	3
42	0.894	13.22	4.1	872	3	868	3
43	0.979	12.88	4.1	874	3	869	3
44	1.067	12.52	4.2	875	3	870	3
45	1.157	12.14	4.2	876	3	872	3
46	1.250	11.74	4.3	877	3	873	3
47	1.346	11.32	4.4	879	4	874	3
48	1.446	10.88	4.5	881	4	875	3
49	1.550	10.42	4.6	882	4	877	3
50	1.659	9.95	4.7	884	4	878	4
51	1.773	9.45	4.8	885	4	879	4
52	1.893	8.92	5.0	887	4	881	4
53	2.021	8.36	5.1	889	4	882	4
54	2.158	7.77	5.3	890	4	884	4
55	2.306	7.16	5.5	890	4	886	4
56	2.469	6.51	5.8	890	4	887	4
57	2.651	5.80	6.1	890	4	889	4
58	2.860	5.00	6.6	890	4	890	4
59	3.111	4.04	7.4	890	4	890	4
60	3.437	2.89	8.7	890	4	890	4
61	3.927	1.61	10.0	890	4	890	4
62	4.000	1.46	10.0	890	4	890	4
63	4.000	1.46	10.0	890	4	890	4
64	N/A	N/A	N/A	N/A	N/A	890	4
65	N/A	N/A	N/A	N/A	N/A	890	4
66	N/A	N/A	N/A	N/A	N/A	890	4
67	N/A	N/A	N/A	N/A	N/A	890	4

Table 2.2.7
Raw Score to Scale Score Lookup Table
Mathematics Grade 3

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-16.988	0.00	10.0	300	1	300	1
1	-15.057	0.00	10.0	300	1	300	1
2	-13.125	0.00	10.0	300	1	300	1
3	-11.194	0.00	10.0	300	1	300	1
4	-9.263	0.00	10.0	300	1	300	1
5	-7.331	0.00	10.0	300	1	300	1
6	-5.400	0.01	10.0	300	1	300	1
7	-3.342	0.23	10.0	310	1	316	1
8	-2.383	1.08	10.0	324	1	326	1
9	-1.927	2.17	9.9	330	1	331	1
10	-1.620	3.35	8.0	335	1	335	1
11	-1.384	4.52	6.9	338	1	339	1
12	-1.190	5.65	6.2	341	1	341	1
13	-1.023	6.72	5.6	344	1	344	1
14	-0.876	7.72	5.3	346	1	346	1
15	-0.742	8.63	5.0	348	2	348	2
16	-0.619	9.47	4.8	349	2	350	2
17	-0.504	10.24	4.6	351	2	352	2
18	-0.395	10.93	4.4	353	2	354	2
19	-0.292	11.56	4.3	354	2	356	2
20	-0.194	12.14	4.2	356	2	357	2
21	-0.098	12.66	4.1	357	2	359	2
22	-0.006	13.14	4.0	358	2	360	3
23	0.083	13.57	4.0	359	2	362	3
24	0.171	13.96	3.9	361	3	363	3
25	0.257	14.31	3.9	362	3	364	3
26	0.341	14.62	3.8	363	3	366	3
27	0.425	14.88	3.8	365	3	367	3
28	0.508	15.09	3.8	366	3	369	3
29	0.590	15.26	3.7	367	3	370	3
30	0.672	15.36	3.7	368	3	371	3
31	0.755	15.41	3.7	370	3	373	3
32	0.838	15.40	3.7	371	3	374	3
33	0.921	15.33	3.7	372	3	375	3
34	1.006	15.20	3.8	373	3	377	3
35	1.093	15.00	3.8	374	3	378	4
36	1.181	14.74	3.8	376	3	380	4
37	1.272	14.40	3.9	377	3	381	4

Table 2.2.7 (continued)

Raw Score to Scale Score Lookup Table

Mathematics Grade 3

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	1.366	13.99	3.9	378	4	383	4
39	1.464	13.50	4.0	380	4	385	4
40	1.566	12.92	4.1	381	4	387	4
41	1.675	12.24	4.2	383	4	389	4
42	1.791	11.45	4.3	385	4	390	4
43	1.917	10.54	4.5	387	4	390	4
44	2.055	9.50	4.7	389	4	390	4
45	2.211	8.37	5.1	390	4	390	4
46	2.389	7.16	5.5	390	4	390	4
47	2.601	5.93	6.0	390	4	390	4
48	2.863	4.70	6.7	390	4	390	4
49	3.210	3.41	7.9	390	4	390	4
50	3.761	1.84	10.0	390	4	390	4
51	4.000	1.35	10.0	390	4	390	4

Table 2.2.8

Raw Score to Scale Score Lookup Table

Mathematics Grade 4

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-10.444	0.01	10.0	400	1	400	1
1	-9.103	0.02	10.0	400	1	400	1
2	-7.762	0.03	10.0	400	1	400	1
3	-6.421	0.06	10.0	400	1	400	1
4	-5.080	0.15	10.0	400	1	400	1
5	-3.655	0.52	10.0	405	1	400	1
6	-2.644	1.30	10.0	419	1	416	1
7	-2.102	2.15	9.6	427	1	427	1
8	-1.733	3.07	8.1	432	1	433	1
9	-1.453	4.04	7.0	436	1	437	1
10	-1.227	5.06	6.3	439	1	440	1
11	-1.037	6.09	5.7	442	1	443	1
12	-0.872	7.10	5.3	444	1	444	1
13	-0.724	8.07	5.0	446	2	447	2
14	-0.591	8.98	4.7	448	2	449	2
15	-0.468	9.83	4.5	450	2	451	2
16	-0.354	10.60	4.3	452	2	453	2
17	-0.246	11.31	4.2	453	2	454	2
18	-0.143	11.95	4.1	454	2	456	2
19	-0.045	12.52	4.0	456	2	457	2
20	0.049	13.04	3.9	457	2	459	2
21	0.141	13.51	3.8	458	2	459	2
22	0.229	13.92	3.8	459	2	461	3
23	0.316	14.27	3.7	461	3	463	3
24	0.401	14.58	3.7	462	3	464	3
25	0.485	14.83	3.7	463	3	465	3
26	0.568	15.04	3.6	465	3	467	3
27	0.650	15.20	3.6	466	3	468	3
28	0.731	15.33	3.6	467	3	469	3
29	0.812	15.41	3.6	468	3	470	3
30	0.894	15.45	3.6	469	3	472	3
31	0.976	15.46	3.6	470	3	473	3
32	1.058	15.41	3.6	471	3	474	3
33	1.142	15.32	3.6	473	3	475	4
34	1.227	15.17	3.6	474	3	477	4
35	1.314	14.95	3.7	475	4	478	4
36	1.403	14.64	3.7	476	4	479	4
37	1.496	14.23	3.7	478	4	480	4

Table 2.2.8 (continued)

Raw Score to Scale Score Lookup Table

Mathematics Grade 4

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	1.592	13.71	3.8	479	4	482	4
39	1.694	13.05	3.9	480	4	483	4
40	1.802	12.25	4.0	482	4	485	4
41	1.919	11.30	4.2	484	4	486	4
42	2.048	10.18	4.4	485	4	488	4
43	2.193	8.93	4.7	487	4	490	4
44	2.361	7.54	5.1	490	4	490	4
45	2.562	6.05	5.7	490	4	490	4
46	2.818	4.51	6.7	490	4	490	4
47	3.172	2.93	8.2	490	4	490	4
48	3.757	1.40	10.0	490	4	490	4
49	4.000	1.03	10.0	490	4	490	4
50	4.000	1.03	10.0	490	4	490	4

Table 2.2.9

Raw Score to Scale Score Lookup Table

Mathematics Grade 5

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-17.415	0.00	10.0	500	1	500	1
1	-15.309	0.00	10.0	500	1	500	1
2	-13.203	0.00	10.0	500	1	500	1
3	-11.097	0.00	10.0	500	1	500	1
4	-8.990	0.00	10.0	500	1	500	1
5	-6.884	0.00	10.0	500	1	500	1
6	-4.778	0.03	10.0	500	1	500	1
7	-2.823	0.63	10.0	516	1	510	1
8	-2.137	1.73	10.0	525	1	524	1
9	-1.746	2.83	8.1	531	1	531	1
10	-1.462	3.87	6.9	534	1	535	1
11	-1.234	4.84	6.2	538	1	539	1
12	-1.041	5.77	5.7	540	1	542	1
13	-0.871	6.68	5.3	543	1	544	2
14	-0.718	7.58	4.9	545	2	546	2
15	-0.579	8.48	4.7	546	2	548	2
16	-0.450	9.39	4.4	548	2	550	2
17	-0.329	10.29	4.2	550	2	551	2
18	-0.216	11.16	4.1	551	2	553	2
19	-0.108	11.99	3.9	553	2	554	2
20	-0.005	12.74	3.8	554	2	556	2
21	0.095	13.42	3.7	556	2	557	2
22	0.191	14.01	3.6	557	2	558	2
23	0.285	14.55	3.6	558	2	559	2
24	0.376	15.03	3.5	559	2	561	3
25	0.466	15.50	3.5	561	3	562	3
26	0.554	15.96	3.4	562	3	563	3
27	0.640	16.44	3.4	563	3	565	3
28	0.725	16.94	3.3	564	3	566	3
29	0.809	17.46	3.3	565	3	567	3
30	0.891	17.98	3.2	566	3	568	3
31	0.972	18.49	3.2	568	3	569	3
32	1.052	18.96	3.1	569	3	571	3
33	1.132	19.36	3.1	570	3	572	3
34	1.211	19.68	3.1	571	3	573	4
35	1.290	19.90	3.0	572	3	574	4
36	1.369	19.99	3.0	573	4	575	4
37	1.449	19.97	3.0	574	4	576	4

Table 2.2.9 (continued)

Raw Score to Scale Score Lookup Table

Mathematics Grade 5

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	1.530	19.80	3.1	575	4	578	4
39	1.614	19.51	3.1	576	4	579	4
40	1.700	19.08	3.1	577	4	580	4
41	1.790	18.50	3.2	579	4	581	4
42	1.884	17.77	3.2	580	4	583	4
43	1.984	16.85	3.3	581	4	584	4
44	2.093	15.68	3.4	583	4	586	4
45	2.213	14.22	3.6	584	4	588	4
46	2.349	12.39	3.9	586	4	590	4
47	2.512	10.15	4.3	588	4	590	4
48	2.719	7.48	5.0	590	4	590	4
49	3.020	4.49	6.4	590	4	590	4
50	3.603	1.58	10.0	590	4	590	4
51	4.000	0.81	10.0	590	4	590	4

Table 2.2.10
Raw Score to Scale Score Lookup Table
Mathematics Grade 6

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-13.531	0.00	10.0	600	1	600	1
1	-12.114	0.00	10.0	600	1	600	1
2	-10.696	0.00	10.0	600	1	600	1
3	-9.278	0.00	10.0	600	1	600	1
4	-7.861	0.00	10.0	600	1	600	1
5	-6.443	0.00	10.0	600	1	600	1
6	-5.025	0.02	10.0	600	1	600	1
7	-3.479	0.31	10.0	607	1	600	1
8	-2.592	1.30	10.0	619	1	613	1
9	-2.118	2.31	8.9	626	1	623	1
10	-1.779	3.25	7.5	630	1	628	1
11	-1.510	4.17	6.7	634	1	632	1
12	-1.285	5.08	6.0	637	1	636	1
13	-1.090	5.95	5.6	640	1	639	1
14	-0.918	6.77	5.2	642	1	641	1
15	-0.762	7.52	5.0	644	1	643	1
16	-0.618	8.22	4.7	645	1	645	1
17	-0.485	8.86	4.6	648	2	647	2
18	-0.360	9.46	4.4	649	2	649	2
19	-0.242	10.02	4.3	651	2	651	2
20	-0.130	10.57	4.2	653	2	652	2
21	-0.023	11.11	4.1	654	2	654	2
22	0.080	11.64	4.0	655	2	655	2
23	0.179	12.19	3.9	657	2	657	2
24	0.274	12.76	3.8	658	2	658	2
25	0.366	13.35	3.7	659	2	659	2
26	0.455	13.98	3.6	661	3	661	3
27	0.541	14.64	3.6	662	3	662	3
28	0.625	15.34	3.5	663	3	663	3
29	0.706	16.07	3.4	664	3	664	3
30	0.786	16.81	3.3	665	3	666	3
31	0.864	17.55	3.2	666	3	667	3
32	0.941	18.24	3.2	667	3	668	3
33	1.017	18.84	3.1	668	3	669	3
34	1.092	19.32	3.1	669	3	670	3
35	1.168	19.62	3.1	670	3	672	4
36	1.243	19.73	3.1	671	4	673	4
37	1.319	19.65	3.1	672	4	674	4

Table 2.2.10 (continued)

Raw Score to Scale Score Lookup Table

Mathematics Grade 6

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	1.397	19.37	3.1	673	4	675	4
39	1.476	18.93	3.1	674	4	677	4
40	1.558	18.35	3.2	676	4	678	4
41	1.643	17.67	3.2	677	4	679	4
42	1.731	16.89	3.3	678	4	681	4
43	1.824	16.02	3.4	679	4	682	4
44	1.922	15.05	3.5	680	4	683	4
45	2.028	13.96	3.6	682	4	685	4
46	2.144	12.71	3.8	683	4	687	4
47	2.272	11.29	4.0	685	4	689	4
48	2.418	9.71	4.4	687	4	690	4
49	2.589	7.99	4.8	690	4	690	4
50	2.799	6.19	5.5	690	4	690	4
51	3.072	4.37	6.5	690	4	690	4
52	3.469	2.62	8.4	690	4	690	4
53	4.000	1.33	10.0	690	4	690	4
54	4.000	1.33	10.0	690	4	690	4

Table 2.2.11
Raw Score to Scale Score Lookup Table
Mathematics Grade 7

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-38.117	0.00	10.0	700	1	700	1
1	-33.744	0.00	10.0	700	1	700	1
2	-29.372	0.00	10.0	700	1	700	1
3	-24.999	0.00	10.0	700	1	700	1
4	-20.626	0.00	10.0	700	1	700	1
5	-16.254	0.00	10.0	700	1	700	1
6	-11.881	0.00	10.0	700	1	700	1
7	-7.508	0.00	10.0	700	1	700	1
8	-3.083	0.17	10.0	713	1	708	1
9	-1.895	1.42	10.0	729	1	726	1
10	-1.452	2.91	8.1	735	1	732	1
11	-1.173	4.43	6.6	739	1	736	1
12	-0.965	5.90	5.7	742	1	739	1
13	-0.798	7.29	5.1	744	1	742	1
14	-0.656	8.61	4.7	746	1	744	1
15	-0.532	9.87	4.4	748	2	746	1
16	-0.420	11.10	4.2	750	2	748	2
17	-0.318	12.31	3.9	751	2	749	2
18	-0.223	13.51	3.8	752	2	751	2
19	-0.134	14.70	3.6	754	2	752	2
20	-0.050	15.88	3.5	755	2	754	2
21	0.030	17.04	3.4	756	2	755	2
22	0.107	18.16	3.3	757	2	756	2
23	0.181	19.20	3.2	758	2	757	2
24	0.254	20.16	3.1	759	2	759	2
25	0.324	21.00	3.0	759	2	759	2
26	0.394	21.70	3.0	761	3	761	3
27	0.463	22.24	2.9	762	3	762	3
28	0.532	22.60	2.9	763	3	764	3
29	0.600	22.78	2.9	764	3	765	3
30	0.670	22.76	2.9	765	3	766	3
31	0.740	22.55	2.9	766	3	767	3
32	0.811	22.17	2.9	767	3	768	3
33	0.884	21.63	3.0	768	3	769	3
34	0.959	20.97	3.0	769	3	771	3
35	1.037	20.21	3.1	770	3	772	3
36	1.117	19.41	3.1	771	3	773	3
37	1.200	18.61	3.2	772	3	774	4

Table 2.2.11 (continued)

Raw Score to Scale Score Lookup Table

Mathematics Grade 7

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	1.287	17.87	3.3	773	3	775	4
39	1.377	17.21	3.3	774	4	777	4
40	1.470	16.65	3.4	776	4	778	4
41	1.568	16.18	3.4	777	4	780	4
42	1.669	15.75	3.5	779	4	781	4
43	1.776	15.28	3.5	780	4	783	4
44	1.887	14.68	3.6	782	4	784	4
45	2.007	13.86	3.7	783	4	786	4
46	2.135	12.79	3.9	785	4	788	4
47	2.277	11.47	4.1	787	4	790	4
48	2.435	9.95	4.4	789	4	790	4
49	2.619	8.31	4.8	790	4	790	4
50	2.838	6.59	5.4	790	4	790	4
51	3.116	4.80	6.3	790	4	790	4
52	3.514	2.92	8.1	790	4	790	4
53	4.000	1.52	10.0	790	4	790	4
54	4.000	1.52	10.0	790	4	790	4

Table 2.2.12
Raw Score to Scale Score Lookup Table
Mathematics Grade 8

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
0	-27.943	0.00	10.0	800	1	800	1
1	-25.013	0.00	10.0	800	1	800	1
2	-22.084	0.00	10.0	800	1	800	1
3	-19.155	0.00	10.0	800	1	800	1
4	-16.225	0.00	10.0	800	1	800	1
5	-13.296	0.00	10.0	800	1	800	1
6	-10.367	0.00	10.0	800	1	800	1
7	-7.437	0.00	10.0	800	1	800	1
8	-4.508	0.05	10.0	800	1	815	1
9	-2.402	1.04	10.0	822	1	830	1
10	-1.768	2.22	9.1	830	1	837	1
11	-1.386	3.34	7.5	836	1	841	1
12	-1.105	4.43	6.5	839	1	844	1
13	-0.878	5.48	5.8	843	1	847	1
14	-0.684	6.45	5.4	845	1	849	2
15	-0.512	7.29	5.0	848	1	851	2
16	-0.355	8.01	4.8	850	2	853	2
17	-0.209	8.65	4.6	852	2	855	2
18	-0.073	9.28	4.5	853	2	856	2
19	0.056	9.94	4.3	855	2	858	2
20	0.176	10.67	4.2	857	2	859	2
21	0.291	11.49	4.0	858	2	860	3
22	0.399	12.36	3.9	859	2	861	3
23	0.501	13.27	3.7	861	3	863	3
24	0.599	14.20	3.6	863	3	864	3
25	0.693	15.11	3.5	864	3	865	3
26	0.783	16.00	3.4	865	3	866	3
27	0.869	16.86	3.3	866	3	867	3
28	0.953	17.69	3.2	867	3	868	3
29	1.035	18.49	3.2	869	3	869	3
30	1.115	19.25	3.1	870	3	870	3
31	1.193	19.96	3.0	870	3	870	3
32	1.270	20.60	3.0	872	4	872	4
33	1.345	21.15	3.0	873	4	873	4
34	1.420	21.58	2.9	874	4	874	4
35	1.495	21.86	2.9	875	4	875	4
36	1.569	22.00	2.9	876	4	876	4
37	1.644	21.98	2.9	877	4	877	4

Table 2.2.12 (continued)
Raw Score to Scale Score Lookup Table
Mathematics Grade 8

Raw Score	Theta	Information	SE (Scale Score)	2019 Scale Score	2019 Achievement Level	2018 Scale Score	2018 Achievement Level
38	1.719	21.84	2.9	878	4	878	4
39	1.795	21.58	2.9	879	4	879	4
40	1.873	21.23	3.0	880	4	880	4
41	1.953	20.76	3.0	881	4	881	4
42	2.036	20.15	3.0	882	4	882	4
43	2.122	19.35	3.1	883	4	883	4
44	2.213	18.31	3.2	885	4	885	4
45	2.310	17.01	3.3	886	4	886	4
46	2.415	15.50	3.5	887	4	887	4
47	2.531	13.83	3.7	889	4	889	4
48	2.661	12.11	3.9	890	4	890	4
49	2.808	10.43	4.2	890	4	890	4
50	2.978	8.83	4.6	890	4	890	4
51	3.180	7.26	5.1	890	4	890	4
52	3.432	5.58	5.8	890	4	890	4
53	3.774	3.72	7.1	890	4	890	4
54	4.000	2.78	8.2	890	4	890	4
55	4.000	2.78	8.2	890	4	890	4

Section 2.3

Cumulative Scale Score Distribution Tables

Table 2.3.1
Cumulative Scale Score Distribution
English Language Arts Grade 3

Scale Score	N	Proportion	Cumulative Proportion
300	44	0.00357	0.00357
309	54	0.00438	0.00794
319	67	0.00543	0.01337
325	109	0.00883	0.02220
329	139	0.01126	0.03346
332	184	0.01491	0.04837
335	197	0.01596	0.06433
337	243	0.01969	0.08402
339	250	0.02026	0.10428
340	247	0.02001	0.12429
342	232	0.01880	0.14309
344	254	0.02058	0.16367
345	256	0.02074	0.18441
346	262	0.02123	0.20564
347	255	0.02066	0.22630
349	299	0.02423	0.25053
350	267	0.02163	0.27216
351	261	0.02115	0.29331
352	273	0.02212	0.31543
353	283	0.02293	0.33836
354	304	0.02463	0.36299
355	322	0.02609	0.38908
356	268	0.02171	0.41079
357	333	0.02698	0.43777
358	305	0.02471	0.46249
359	326	0.02641	0.48890
360	316	0.02560	0.51450
361	353	0.02860	0.54310
362	333	0.02698	0.57009
363	365	0.02957	0.59966
365	354	0.02868	0.62834
366	357	0.02893	0.65727
367	343	0.02779	0.68506
368	351	0.02844	0.71350
370	716	0.05801	0.77151
372	347	0.02812	0.79963
374	313	0.02536	0.82499
375	318	0.02577	0.85075
377	274	0.02220	0.87295
378	251	0.02034	0.89329

Table 2.3.1 (continued)
Cumulative Scale Score Distribution
English Language Arts Grade 3

Scale Score	N	Proportion	Cumulative Proportion
380	264	0.02139	0.91468
382	237	0.01920	0.93388
384	203	0.01645	0.95033
386	158	0.01280	0.96313
389	149	0.01207	0.97521
390	306	0.02479	1.00000

Table 2.3.2
Cumulative Scale Score Distribution
English Language Arts Grade 4

Scale Score	N	Proportion	Cumulative Proportion
400	30	0.00233	0.00233
405	25	0.00194	0.00427
416	42	0.00326	0.00754
422	49	0.00381	0.01134
427	83	0.00645	0.01779
430	117	0.00909	0.02688
433	185	0.01437	0.04126
436	166	0.01290	0.05415
438	170	0.01321	0.06736
440	208	0.01616	0.08352
441	200	0.01554	0.09906
443	226	0.01756	0.11662
444	189	0.01468	0.13130
446	218	0.01694	0.14824
447	260	0.02020	0.16844
448	276	0.02144	0.18988
450	297	0.02308	0.21296
451	263	0.02043	0.23339
452	287	0.02230	0.25569
453	308	0.02393	0.27962
454	305	0.02370	0.30332
455	307	0.02385	0.32717
457	329	0.02556	0.35273
458	367	0.02851	0.38124
459	715	0.05555	0.43680
461	377	0.02929	0.46609
462	369	0.02867	0.49476
463	384	0.02983	0.52459
464	388	0.03015	0.55474
465	366	0.02844	0.58317
467	391	0.03038	0.61355
468	395	0.03069	0.64424
469	403	0.03131	0.67555
470	414	0.03217	0.70772
472	358	0.02781	0.73553
473	382	0.02968	0.76521
474	393	0.03053	0.79574
476	365	0.02836	0.82410
477	343	0.02665	0.85075
479	312	0.02424	0.87499

Table 2.3.2 (continued)
Cumulative Scale Score Distribution
English Language Arts Grade 4

Scale Score	N	Proportion	Cumulative Proportion
480	278	0.02160	0.89659
482	266	0.02067	0.91726
484	212	0.01647	0.93373
486	190	0.01476	0.94849
488	154	0.01196	0.96045
490	509	0.03955	1.00000

Table 2.3.3
Cumulative Scale Score Distribution
English Language Arts Grade 5

Scale Score	N	Proportion	Cumulative Proportion
500	71	0.00547	0.00547
514	49	0.00377	0.00924
521	70	0.00539	0.01463
526	102	0.00786	0.02249
530	132	0.01017	0.03266
532	167	0.01286	0.04552
535	195	0.01502	0.06054
537	213	0.01640	0.07694
539	223	0.01717	0.09412
541	256	0.01972	0.11383
542	252	0.01941	0.13324
544	280	0.02157	0.15481
545	301	0.02318	0.17799
546	276	0.02126	0.19925
548	263	0.02026	0.21950
549	321	0.02472	0.24422
550	337	0.02596	0.27018
552	383	0.02950	0.29968
553	331	0.02549	0.32517
554	349	0.02688	0.35205
555	383	0.02950	0.38155
556	355	0.02734	0.40889
558	361	0.02780	0.43669
559	399	0.03073	0.46742
560	398	0.03065	0.49807
561	375	0.02888	0.52696
563	402	0.03096	0.55792
564	398	0.03065	0.58857
565	421	0.03242	0.62100
566	430	0.03312	0.65411
568	385	0.02965	0.68376
569	434	0.03343	0.71719
570	377	0.02904	0.74623
572	391	0.03011	0.77634
573	363	0.02796	0.80430
575	722	0.05561	0.85990
578	301	0.02318	0.88309
579	275	0.02118	0.90427
581	280	0.02157	0.92583
583	186	0.01433	0.94016

Table 2.3.3 (continued)
Cumulative Scale Score Distribution
English Language Arts Grade 5

Scale Score	N	Proportion	Cumulative Proportion
585	196	0.01510	0.95525
587	158	0.01217	0.96742
589	120	0.00924	0.97666
590	303	0.02334	1.00000

Table 2.3.4
Cumulative Scale Score Distribution
English Language Arts Grade 6

Scale Score	N	Proportion	Cumulative Proportion
600	50	0.00379	0.00379
609	32	0.00243	0.00622
617	60	0.00455	0.01077
622	69	0.00523	0.01600
626	99	0.00751	0.02351
629	121	0.00918	0.03268
632	150	0.01137	0.04406
634	159	0.01206	0.05612
636	154	0.01168	0.06779
638	179	0.01357	0.08137
640	172	0.01304	0.09441
642	186	0.01410	0.10852
643	238	0.01805	0.12656
645	212	0.01608	0.14264
646	240	0.01820	0.16084
647	246	0.01865	0.17949
649	284	0.02154	0.20103
650	299	0.02267	0.22371
651	304	0.02305	0.24676
652	311	0.02358	0.27034
654	309	0.02343	0.29377
655	362	0.02745	0.32123
656	364	0.02760	0.34883
657	362	0.02745	0.37628
658	413	0.03132	0.40760
659	393	0.02980	0.43740
660	389	0.02950	0.46690
662	402	0.03048	0.49738
663	440	0.03337	0.53075
664	438	0.03321	0.56396
665	432	0.03276	0.59672
666	439	0.03329	0.63001
668	391	0.02965	0.65966
669	449	0.03405	0.69371
670	418	0.03170	0.72541
671	392	0.02973	0.75514
673	381	0.02889	0.78403
674	384	0.02912	0.81315
675	356	0.02700	0.84015
677	332	0.02518	0.86532

Table 2.3.4 (continued)
Cumulative Scale Score Distribution
English Language Arts Grade 6

Scale Score	N	Proportion	Cumulative Proportion
678	315	0.02389	0.88921
680	303	0.02298	0.91219
682	244	0.01850	0.93069
683	232	0.01759	0.94828
685	164	0.01244	0.96072
687	144	0.01092	0.97164
690	374	0.02836	1.00000

Table 2.3.5
Cumulative Scale Score Distribution
English Language Arts Grade 7

Scale Score	N	Proportion	Cumulative Proportion
700	50	0.00387	0.00387
701	36	0.00278	0.00665
712	51	0.00394	0.01059
719	102	0.00789	0.01848
724	115	0.00889	0.02737
728	165	0.01276	0.04013
731	165	0.01276	0.05288
733	176	0.01361	0.06649
736	202	0.01562	0.08211
738	195	0.01508	0.09719
740	192	0.01484	0.11203
742	210	0.01624	0.12827
743	191	0.01477	0.14303
744	234	0.01809	0.16113
746	244	0.01887	0.17999
748	228	0.01763	0.19762
749	245	0.01894	0.21656
750	242	0.01871	0.23527
752	255	0.01972	0.25499
753	278	0.02149	0.27648
754	302	0.02335	0.29983
755	300	0.02319	0.32302
757	365	0.02822	0.35124
758	306	0.02366	0.37490
759	366	0.02830	0.40320
760	355	0.02745	0.43065
761	349	0.02698	0.45763
762	371	0.02868	0.48632
763	362	0.02799	0.51430
765	370	0.02861	0.54291
766	393	0.03039	0.57330
767	408	0.03154	0.60484
768	390	0.03015	0.63499
769	392	0.03031	0.66530
770	388	0.03000	0.69530
771	377	0.02915	0.72445
772	335	0.02590	0.75035
774	341	0.02636	0.77671
775	341	0.02636	0.80308
776	342	0.02644	0.82952

Table 2.3.5 (continued)
Cumulative Scale Score Distribution
English Language Arts Grade 7

Scale Score	N	Proportion	Cumulative Proportion
778	324	0.02505	0.85457
779	309	0.02389	0.87846
780	282	0.02180	0.90026
782	246	0.01902	0.91928
783	215	0.01662	0.93591
785	184	0.01423	0.95013
787	172	0.01330	0.96343
789	139	0.01075	0.97418
790	334	0.02582	1.00000

Table 2.3.6
Cumulative Scale Score Distribution
English Language Arts Grade 8

Scale Score	N	Proportion	Cumulative Proportion
800	55	0.00420	0.00420
807	26	0.00199	0.00619
816	51	0.00390	0.01008
822	77	0.00588	0.01596
826	107	0.00817	0.02414
830	120	0.00917	0.03330
833	165	0.01260	0.04590
835	174	0.01329	0.05919
837	193	0.01474	0.07393
839	219	0.01673	0.09066
841	201	0.01535	0.10601
843	216	0.01650	0.12251
844	235	0.01795	0.14046
846	235	0.01795	0.15841
847	223	0.01703	0.17544
848	241	0.01841	0.19384
850	239	0.01825	0.21210
851	247	0.01887	0.23096
852	259	0.01978	0.25074
853	285	0.02177	0.27251
854	283	0.02161	0.29413
855	271	0.02070	0.31482
857	342	0.02612	0.34095
858	301	0.02299	0.36393
859	688	0.05255	0.41648
861	361	0.02757	0.44405
862	343	0.02620	0.47025
863	349	0.02666	0.49691
864	364	0.02780	0.52471
865	390	0.02979	0.55449
866	424	0.03238	0.58688
868	413	0.03154	0.61842
869	421	0.03215	0.65058
870	408	0.03116	0.68174
871	407	0.03109	0.71282
872	387	0.02956	0.74238
874	395	0.03017	0.77255
875	385	0.02941	0.80196
876	363	0.02772	0.82968
877	327	0.02498	0.85466

Table 2.3.6 (continued)
Cumulative Scale Score Distribution
English Language Arts Grade 8

Scale Score	N	Proportion	Cumulative Proportion
879	332	0.02536	0.88001
881	278	0.02123	0.90124
882	252	0.01925	0.92049
884	199	0.01520	0.93569
885	200	0.01528	0.95097
887	166	0.01268	0.96364
889	142	0.01085	0.97449
890	334	0.02551	1.00000

Table 2.3.7
Cumulative Scale Score Distribution
Mathematics Grade 3

Scale Score	N	Proportion	Cumulative Proportion
300	223	0.01799	0.01799
310	196	0.01581	0.03380
324	272	0.02194	0.05574
330	322	0.02598	0.08172
335	376	0.03033	0.11205
338	393	0.03170	0.14376
341	431	0.03477	0.17853
344	443	0.03574	0.21426
346	438	0.03533	0.24960
348	460	0.03711	0.28671
349	462	0.03727	0.32398
351	433	0.03493	0.35891
353	427	0.03445	0.39335
354	443	0.03574	0.42909
356	434	0.03501	0.46410
357	447	0.03606	0.50016
358	422	0.03404	0.53420
359	426	0.03437	0.56857
361	401	0.03235	0.60092
362	369	0.02977	0.63069
363	397	0.03203	0.66271
365	359	0.02896	0.69167
366	381	0.03074	0.72241
367	351	0.02832	0.75073
368	332	0.02678	0.77751
370	352	0.02840	0.80591
371	297	0.02396	0.82986
372	256	0.02065	0.85052
373	214	0.01726	0.86778
374	229	0.01847	0.88625
376	205	0.01654	0.90279
377	191	0.01541	0.91820
378	167	0.01347	0.93167
380	180	0.01452	0.94619
381	130	0.01049	0.95668
383	138	0.01113	0.96781
385	109	0.00879	0.97661
387	74	0.00597	0.98258
389	69	0.00557	0.98814
390	147	0.01186	1.00000

Table 2.3.8
Cumulative Scale Score Distribution
Mathematics Grade 4

Scale Score	N	Proportion	Cumulative Proportion
400	66	0.00511	0.00511
405	96	0.00743	0.01254
419	158	0.01223	0.02477
427	256	0.01982	0.04459
432	327	0.02531	0.06990
436	402	0.03112	0.10102
439	474	0.03669	0.13771
442	475	0.03677	0.17449
444	516	0.03994	0.21443
446	499	0.03863	0.25306
448	532	0.04118	0.29424
450	486	0.03762	0.33186
452	521	0.04033	0.37219
453	508	0.03932	0.41152
454	503	0.03894	0.45046
456	461	0.03569	0.48614
457	478	0.03700	0.52315
458	490	0.03793	0.56108
459	447	0.03460	0.59568
461	408	0.03158	0.62726
462	426	0.03298	0.66024
463	375	0.02903	0.68927
465	385	0.02980	0.71907
466	383	0.02965	0.74872
467	330	0.02555	0.77427
468	300	0.02322	0.79749
469	275	0.02129	0.81878
470	290	0.02245	0.84123
471	274	0.02121	0.86244
473	245	0.01897	0.88141
474	241	0.01866	0.90006
475	192	0.01486	0.91492
476	188	0.01455	0.92948
478	160	0.01239	0.94186
479	133	0.01030	0.95216
480	116	0.00898	0.96114
482	118	0.00913	0.97027
484	93	0.00720	0.97747
485	73	0.00565	0.98312
487	65	0.00503	0.98816

Table 2.3.8 (continued)
Cumulative Scale Score Distribution
Mathematics Grade 4

Scale Score	N	Proportion	Cumulative Proportion
490	153	0.01184	1.00000

Table 2.3.9

Cumulative Scale Score Distribution

Mathematics Grade 5

Scale Score	N	Proportion	Cumulative Proportion
500	247	0.01897	0.01897
516	207	0.01590	0.03487
525	269	0.02066	0.05553
531	349	0.02681	0.08234
534	396	0.03042	0.11276
538	437	0.03357	0.14632
540	488	0.03748	0.18381
543	518	0.03979	0.22360
545	560	0.04301	0.26661
546	601	0.04616	0.31277
548	596	0.04578	0.35855
550	591	0.04540	0.40395
551	577	0.04432	0.44827
553	547	0.04202	0.49028
554	523	0.04017	0.53046
556	471	0.03618	0.56663
557	506	0.03887	0.60550
558	420	0.03226	0.63776
559	450	0.03456	0.67233
561	409	0.03142	0.70374
562	385	0.02957	0.73331
563	300	0.02304	0.75636
564	304	0.02335	0.77971
565	317	0.02435	0.80406
566	246	0.01890	0.82295
568	257	0.01974	0.84269
569	205	0.01575	0.85844
570	203	0.01559	0.87403
571	231	0.01774	0.89177
572	169	0.01298	0.90475
573	185	0.01421	0.91896
574	167	0.01283	0.93179
575	156	0.01198	0.94377
576	126	0.00968	0.95345
577	108	0.00830	0.96175
579	93	0.00714	0.96889
580	89	0.00684	0.97573
581	86	0.00661	0.98233
583	58	0.00446	0.98679
584	52	0.00399	0.99078

Table 2.3.9 (continued)
Cumulative Scale Score Distribution
Mathematics Grade 5

Scale Score	N	Proportion	Cumulative Proportion
586	40	0.00307	0.99386
588	35	0.00269	0.99654
590	45	0.00346	1.00000

Table 2.3.10
Cumulative Scale Score Distribution
Mathematics Grade 6

Scale Score	N	Proportion	Cumulative Proportion
600	236	0.01786	0.01786
607	195	0.01476	0.03262
619	313	0.02369	0.05631
626	330	0.02498	0.08129
630	418	0.03164	0.11293
634	484	0.03663	0.14956
637	457	0.03459	0.18415
640	502	0.03800	0.22215
642	486	0.03678	0.25893
644	592	0.04481	0.30374
645	556	0.04208	0.34582
648	573	0.04337	0.38919
649	572	0.04329	0.43249
651	571	0.04322	0.47570
653	538	0.04072	0.51642
654	537	0.04064	0.55707
655	517	0.03913	0.59620
657	494	0.03739	0.63359
658	484	0.03663	0.67022
659	421	0.03186	0.70209
661	381	0.02884	0.73093
662	381	0.02884	0.75976
663	374	0.02831	0.78807
664	320	0.02422	0.81229
665	289	0.02187	0.83417
666	262	0.01983	0.85400
667	237	0.01794	0.87193
668	208	0.01574	0.88768
669	198	0.01499	0.90266
670	165	0.01249	0.91515
671	169	0.01279	0.92794
672	144	0.01090	0.93884
673	129	0.00976	0.94861
674	103	0.00780	0.95640
676	111	0.00840	0.96480
677	79	0.00598	0.97078
678	74	0.00560	0.97639
679	72	0.00545	0.98183
680	51	0.00386	0.98569
682	50	0.00378	0.98948

Table 2.3.10 (continued)
Cumulative Scale Score Distribution
Mathematics Grade 6

Scale Score	N	Proportion	Cumulative Proportion
683	40	0.00303	0.99251
685	39	0.00295	0.99546
687	19	0.00144	0.99690
690	41	0.00310	1.00000

Table 2.3.11
Cumulative Scale Score Distribution
Mathematics Grade 7

Scale Score	N	Proportion	Cumulative Proportion
700	625	0.04825	0.04825
713	362	0.02795	0.07620
729	459	0.03544	0.11163
735	493	0.03806	0.14970
739	513	0.03960	0.18930
742	478	0.03690	0.22620
744	519	0.04007	0.26627
746	497	0.03837	0.30464
748	515	0.03976	0.34440
750	482	0.03721	0.38161
751	432	0.03335	0.41496
752	429	0.03312	0.44808
754	442	0.03412	0.48220
755	389	0.03003	0.51224
756	427	0.03297	0.54520
757	372	0.02872	0.57392
758	402	0.03104	0.60496
759	718	0.05543	0.66039
761	368	0.02841	0.68880
762	328	0.02532	0.71412
763	335	0.02586	0.73998
764	311	0.02401	0.76399
765	319	0.02463	0.78862
766	274	0.02115	0.80977
767	275	0.02123	0.83100
768	251	0.01938	0.85038
769	239	0.01845	0.86883
770	203	0.01567	0.88451
771	210	0.01621	0.90072
772	217	0.01675	0.91747
773	188	0.01451	0.93198
774	147	0.01135	0.94333
776	145	0.01119	0.95453
777	121	0.00934	0.96387
779	85	0.00656	0.97043
780	73	0.00564	0.97607
782	74	0.00571	0.98178
783	48	0.00371	0.98549
785	59	0.00455	0.99004
787	42	0.00324	0.99328

Table 2.3.11 (continued)
Cumulative Scale Score Distribution
Mathematics Grade 7

Scale Score	N	Proportion	Cumulative Proportion
789	35	0.00270	0.99599
790	52	0.00401	1.00000

Table 2.3.12
Cumulative Scale Score Distribution
Mathematics Grade 8

Scale Score	N	Proportion	Cumulative Proportion
800	452	0.03449	0.03449
822	288	0.02197	0.05646
830	370	0.02823	0.08469
836	423	0.03228	0.11697
839	504	0.03846	0.15542
843	558	0.04258	0.19800
845	605	0.04616	0.24416
848	673	0.05135	0.29551
850	686	0.05234	0.34786
852	667	0.05089	0.39875
853	699	0.05333	0.45208
855	666	0.05082	0.50290
857	674	0.05143	0.55433
858	597	0.04555	0.59988
859	527	0.04021	0.64009
861	528	0.04029	0.68038
863	477	0.03640	0.71677
864	431	0.03289	0.74966
865	416	0.03174	0.78140
866	386	0.02945	0.81085
867	306	0.02335	0.83420
869	261	0.01991	0.85411
870	470	0.03586	0.88997
872	192	0.01465	0.90462
873	177	0.01351	0.91813
874	166	0.01267	0.93080
875	113	0.00862	0.93942
876	116	0.00885	0.94827
877	116	0.00885	0.95712
878	89	0.00679	0.96391
879	82	0.00626	0.97017
880	60	0.00458	0.97474
881	63	0.00481	0.97955
882	47	0.00359	0.98314
883	50	0.00382	0.98695
885	37	0.00282	0.98978
886	34	0.00259	0.99237
887	32	0.00244	0.99481
889	20	0.00153	0.99634
890	48	0.00366	1.00000

Section 2.4

Rescore Analysis Results

Table 2.4.1

Rescore Analysis

English Language Arts Grade 3

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
410572	3	0.98039	1.18627	0.70159	0.71893	0.29345	False
410580	3	0.60976	0.58537	0.67439	0.62527	-0.03617	False

Table 2.4.2

Rescore Analysis

English Language Arts Grade 4

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
476172	2	0.96517	0.89055	0.72373	0.69135	-0.10311	False

Table 2.4.3

Rescore Analysis

English Language Arts Grade 5

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
131484A	2	0.47805	0.36098	0.61497	0.52059	-0.19037	False

Table 2.4.4

Rescore Analysis

English Language Arts Grade 6

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
130184A	2	0.80392	0.43627	0.69536	0.58794	-0.52871	True

Table 2.4.5

Rescore Analysis

English Language Arts Grade 7

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
477778	2	1.21675	1.06897	0.62324	0.52197	-0.23712	False

Table 2.4.6

Rescore Analysis

English Language Arts Grade 8

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
420990	4	2.01463	1.86341	0.94183	1.00532	-0.16056	False

Table 2.4.7

Rescore Analysis

Mathematics Grade 3

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
464499A	6	0.47317	0.45854	0.81980	0.88256	-0.01785	False
464499B	6	0.27805	0.29756	0.47046	0.48934	0.04148	False

Table 2.4.8

Rescore Analysis

Mathematics Grade 4

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
447971A	6	1.23415	1.25854	1.30752	1.30101	0.01865	False
447971B	6	0.23902	0.28293	0.49154	0.52202	0.08932	False

Table 2.4.9

Rescore Analysis

Mathematics Grade 5

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
415228A	3	0.73659	0.74146	0.74681	0.73863	0.00653	False
415228B	3	0.19024	0.16098	0.39345	0.36841	-0.07439	False

Table 2.4.10

Rescore Analysis

Mathematics Grade 6

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
412531A	6	1.21463	1.20976	1.29205	1.30230	-0.00378	False
412531B	6	0.35610	0.28780	0.63015	0.58586	-0.10838	False

Table 2.4.11

Rescore Analysis

Mathematics Grade 7

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
446620A	6	1.42439	1.30732	1.29114	1.21195	-0.09067	False
446620B	6	0.31220	0.26341	0.56020	0.48394	-0.08708	False

Table 2.4.12

Rescore Analysis

Mathematics Grade 8

Item Id	Max	Old Mean	New Mean	Old StDev	New StDev	Effect Size	Discard
482018A	3	0.84878	0.90732	0.70123	0.69747	0.08348	False
482018B	3	0.18049	0.13659	0.38553	0.34425	-0.11387	False

Section 2.5

Tabled Delta Analysis Results

Table 2.5.1

Delta Analysis

English Language Arts Grade 3

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
130312A	0.76000	0.76000	10.17479	10.17479	1	False	0.31342
130319A	0.69000	0.66000	11.01660	11.35015	1	False	-0.90893
130325A	0.42000	0.41000	13.80757	13.91018	1	False	-0.03475
130326A	0.54500	0.54500	12.54785	12.54785	2	False	-1.09382
130328A	0.69000	0.69000	11.01660	11.01660	1	False	-0.18578
410572	0.25333	0.29667	15.65615	15.13605	3	False	-1.04406
410580	0.11667	0.16333	17.76726	16.92340	3	False	-0.88688
422166	0.42000	0.43000	13.80757	13.70550	1	False	-0.72683
474429	0.41000	0.40000	13.91018	14.01339	1	False	0.02814
474695	0.50000	0.52000	13.00000	12.79939	1	False	-0.68362
474704	0.49000	0.48000	13.10028	13.20061	1	False	-0.46184
474706	0.47000	0.45000	13.30108	13.50265	1	False	-0.00049
474708	0.32000	0.30000	14.87080	15.09760	1	False	1.01571
543241	0.72000	0.69000	10.66863	11.01660	1	False	-1.06654
543243	0.31000	0.35000	14.98340	14.54128	1	False	-1.04320
543247	0.71000	0.68000	10.78646	11.12920	1	False	-1.01432
543249	0.35000	0.39500	14.54128	14.06524	2	False	-0.66633
543253	0.68000	0.69000	11.12920	11.01660	1	False	0.12820
543259	0.52000	0.55000	12.79939	12.49735	1	False	-0.22174
543524	0.30000	0.26500	15.09760	15.51202	2	False	1.78458
543530	0.61000	0.60000	11.88272	11.98661	1	False	-1.05067
543532	0.79000	0.72000	9.77432	10.66863	1	False	0.25049
543534	0.72000	0.64000	10.66863	11.56616	1	False	0.79169
543542	0.35000	0.32000	14.54128	14.87080	1	False	1.16758
543546	0.82000	0.73000	9.33854	10.54875	1	False	1.06018
543555	0.60500	0.60000	11.93476	11.98661	2	False	-0.90558
543557	0.34000	0.37000	14.64985	14.32741	1	False	-0.97245
543565	0.79000	0.75000	9.77432	10.30204	1	False	-0.98905
543571	0.88000	0.85000	8.30005	8.85427	1	False	-0.44879
543575	0.70000	0.71000	10.90240	10.78646	1	False	0.27396
543577	0.80000	0.77000	9.63352	10.04461	1	False	-0.75563
552223	0.60500	0.54000	11.93476	12.59827	2	False	0.75121
552233	0.79000	0.71000	9.77432	10.78646	1	False	0.64889
552235	0.75000	0.72000	10.30204	10.66863	1	False	-1.00158
552247	0.71000	0.63000	10.78646	11.67259	1	False	0.82300
552251	0.73000	0.75000	10.54875	10.30204	1	False	0.92584
552255	0.75000	0.67000	10.30204	11.24035	1	False	0.71217
552261	0.18500	0.29000	16.58589	15.21354	2	False	1.15188
559821	0.41500	0.48500	13.85881	13.15043	2	False	0.52397
559830	0.75000	0.75000	10.30204	10.30204	1	False	0.23796

Table 2.5.1 (continued)

Delta Analysis

English Language Arts Grade 3

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
559835	0.46000	0.47000	13.40173	13.30108	1	False	-0.96269
559838	0.29000	0.32000	15.21354	14.87080	1	False	-0.70684
559841	0.73000	0.73000	10.54875	10.54875	1	False	0.09166
559845	0.52000	0.49000	12.79939	13.10028	1	False	0.03784
559847	0.53000	0.56000	12.69892	12.39612	1	False	-0.15957
559849	0.46000	0.47000	13.40173	13.30108	1	False	-0.96269
559851	0.14000	0.30500	17.32128	15.04029	2	True	3.78810
568986	0.66000	0.68000	11.35015	11.12920	1	False	0.36349
569376	0.55000	0.64000	12.49735	11.56616	1	False	2.08472

Table 2.5.2

Delta Analysis

English Language Arts Grade 4

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
420698	0.44000	0.42000	13.60388	13.80757	1	False	-0.08932
420714	0.59000	0.58000	12.08982	12.19243	1	False	-0.51993
420723	0.49500	0.51000	13.05013	12.89972	2	False	-0.90849
420785	0.82000	0.81000	9.33854	9.48841	1	False	-0.81098
420820	0.52000	0.50000	12.79939	13.00000	1	False	-0.21039
422664	0.72000	0.70000	10.66863	10.90240	1	False	-0.44316
476097	0.60000	0.59000	11.98661	12.08982	1	False	-0.53334
476102	0.30000	0.30500	15.09760	15.04029	2	False	-0.43205
476121	0.73000	0.71000	10.54875	10.78646	1	False	-0.45182
476151	0.48000	0.46000	13.20061	13.40173	1	False	-0.15220
476172	0.36000	0.36500	14.43384	14.38050	2	False	-0.51808
476177	0.76000	0.75000	10.17479	10.30204	1	False	-0.74009
486800	0.56000	0.58000	12.39612	12.19243	1	False	-0.70201
543932	0.41000	0.38000	13.91018	14.22192	1	False	0.18418
543940	0.25000	0.25000	15.69796	15.69796	1	False	-0.22466
543942	0.46500	0.40500	13.35138	13.96170	2	False	0.73995
543944	0.91000	0.87000	7.63698	8.49444	1	False	0.45238
543946	0.31000	0.30000	14.98340	15.09760	1	False	-0.08338
543950	0.48000	0.46000	13.20061	13.40173	1	False	-0.15220
544002	0.30000	0.53000	15.09760	12.69892	1	True	3.58388
544006	0.32000	0.55000	14.87080	12.49735	1	True	3.56246
544014	0.42000	0.62000	13.80757	11.77808	1	False	2.98197
544034	0.44000	0.45000	13.60388	13.50265	1	False	-0.73814
544036	0.72000	0.69000	10.66863	11.01660	1	False	-0.20016
544453	0.60000	0.60000	11.98661	11.98661	2	False	-0.75295
544455	0.69000	0.62000	11.01660	11.77808	1	False	0.72923
544457	0.64000	0.64000	11.56616	11.56616	1	False	-0.81280
544460	0.65000	0.65000	11.45872	11.45872	1	False	-0.82809
544476	0.93000	0.89000	7.09684	8.09389	1	False	0.67252
544483	0.40000	0.40000	14.01339	14.01339	1	False	-0.46445
552900	0.74000	0.73000	10.42662	10.54875	2	False	-0.71514
552906	0.51000	0.54000	12.89972	12.59827	1	False	-0.56568
552908	0.78000	0.79000	9.91123	9.77432	1	False	-0.49040
552910	0.85000	0.83000	8.85427	9.18334	1	False	-0.49863
552912	0.74000	0.80000	10.42662	9.63352	1	False	0.83246
552916	0.44000	0.49000	13.60388	13.10028	1	False	-0.23580
552918	0.52000	0.51000	12.79939	12.89972	1	False	-0.42376
552922	0.36500	0.43000	14.38050	13.70550	2	False	0.01837
552924	0.24333	0.23000	15.78248	15.95539	3	False	0.15528
552927	0.54500	0.53000	12.54785	12.69892	2	False	-0.35161

Table 2.5.2 (continued)

Delta Analysis

English Language Arts Grade 4

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
552931	0.58000	0.61000	12.19243	11.88272	1	False	-0.44746
552933	0.70000	0.71000	10.90240	10.78646	1	False	-0.67612
552938	0.42000	0.42000	13.80757	13.80757	1	False	-0.49374
552940	0.72000	0.76000	10.66863	10.17479	1	False	0.16126
552944	0.57000	0.64000	12.29450	11.56616	1	False	0.42878
552946	0.63000	0.66000	11.67259	11.35015	1	False	-0.34636
552948	0.54000	0.62000	12.59827	11.77808	1	False	0.58097
552950	0.31000	0.30000	14.98340	15.09760	1	False	-0.08338
552956	0.22667	0.18667	15.99948	16.56099	3	False	1.01303

Table 2.5.3

Delta Analysis

English Language Arts Grade 5

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
131427A	0.40000	0.41000	14.01339	13.91018	1	False	-0.77372
131429A	0.36000	0.36000	14.43384	14.43384	1	False	-0.66303
131430A	0.46000	0.43000	13.40173	13.70550	1	False	-0.30808
131431A	0.62000	0.62000	11.77808	11.77808	1	False	-0.62891
131437A	0.46000	0.45000	13.40173	13.50265	1	False	-0.53626
131440A	0.43000	0.43000	13.70550	13.70550	1	False	-0.65367
131444A	0.69000	0.69000	11.01660	11.01660	1	False	-0.61913
131445A	0.60000	0.60000	11.98661	11.98661	1	False	-0.63159
131452A	0.68500	0.69000	11.07309	11.01660	2	False	-0.68340
131484A	0.31500	0.20500	14.92691	16.29557	2	False	0.87018
459808	0.53000	0.59000	12.69892	12.08982	1	False	-0.26191
459811	0.61000	0.62000	11.88272	11.77808	1	False	-0.74797
459819	0.80000	0.79000	9.63352	9.77432	1	False	-0.44298
459823	0.64000	0.63000	11.56616	11.67259	1	False	-0.50648
459830	0.33000	0.36000	14.75965	14.43384	1	False	-0.55409
536024	0.51000	0.54000	12.89972	12.59827	1	False	-0.60538
536026	0.71000	0.69000	10.78646	11.01660	1	False	-0.35730
536034	0.54500	0.53000	12.54785	12.69892	2	False	-0.46886
536040	0.74000	0.71000	10.42662	10.78646	1	False	-0.20678
536046	0.64000	0.71000	11.56616	10.78646	1	False	-0.08456
536048	0.47000	0.47000	13.30108	13.30108	1	False	-0.64848
536061	0.84000	0.83000	9.02217	9.18334	1	False	-0.41221
536068	0.41000	0.40000	13.91018	14.01339	1	False	-0.54021
536070	0.20000	0.20500	16.36648	16.29557	2	False	-0.76762
536072	0.65000	0.64000	11.45872	11.56616	1	False	-0.50394
536076	0.79000	0.79000	9.77432	9.77432	1	False	-0.60317
536078	0.43000	0.40000	13.70550	14.01339	1	False	-0.30734
545263	0.71000	0.69000	10.78646	11.01660	1	False	-0.35730
545265	0.42000	0.34000	13.80757	14.64985	1	False	0.29245
545273	0.39000	0.35000	14.11728	14.54128	2	False	-0.18202
545279	0.78000	0.75000	9.91123	10.30204	1	False	-0.16532
545281	0.51000	0.51000	12.89972	12.89972	1	False	-0.64332
545283	0.51000	0.44000	12.89972	13.60388	1	False	0.14875
552537	0.20000	0.49000	16.36648	13.10028	2	False	2.77405
552544	0.55000	0.89000	12.49735	8.09389	1	True	4.00358
552552	0.77000	0.81000	10.04461	9.48841	1	False	-0.35552
552554	0.47000	0.77000	13.30108	10.04461	1	False	2.72371
552556	0.35000	0.51000	14.54128	12.89972	1	False	0.92311
552561	0.49000	0.33000	13.10028	14.75965	1	False	1.22065
552563	0.40000	0.50000	14.01339	13.00000	1	False	0.20974

Table 2.5.3 (continued)

Delta Analysis

English Language Arts Grade 5

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
552565	0.19500	0.41000	16.43847	13.91018	2	False	1.94493
552567	0.27667	0.25667	15.37109	15.61462	3	False	-0.40113
560295	0.53000	0.43500	12.69892	13.65463	2	False	0.43429
560301	0.81000	0.75000	9.48841	10.30204	1	False	0.31571
560306	0.71000	0.70000	10.78646	10.90240	1	False	-0.48576
560314	0.57000	0.56000	12.29450	12.39612	1	False	-0.52124
560316	0.85000	0.81000	8.85427	9.48841	1	False	0.12197
560318	0.73000	0.64000	10.54875	11.56616	1	False	0.53132
560333	0.25667	0.20333	15.61462	16.31910	3	False	0.11422

Table 2.5.4

Delta Analysis

English Language Arts Grade 6

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
130154A	0.40000	0.38000	14.01339	14.22192	1	False	-0.18250
130167A	0.51000	0.50000	12.89972	13.00000	1	False	-0.61935
130168A	0.45000	0.43000	13.50265	13.70550	1	False	-0.21563
130171A	0.84000	0.80000	9.02217	9.63352	1	False	1.23705
130173A	0.58500	0.58500	12.14119	12.14119	2	False	-1.01784
130184A	0.26000	0.20000	15.57338	16.36648	2	False	2.07601
409362	0.75000	0.68000	10.30204	11.12920	1	False	2.08674
409385	0.40000	0.41000	14.01339	13.91018	1	False	-1.17930
409396	0.58000	0.58000	12.19243	12.19243	1	False	-1.01668
409447	0.37000	0.34000	14.32741	14.64985	1	False	0.25780
409458	0.47500	0.47000	13.25083	13.30108	2	False	-0.80170
409472	0.58000	0.60000	12.19243	11.98661	1	False	-0.74800
471626	0.38000	0.38000	14.22192	14.22192	1	False	-0.97094
536840	0.79000	0.75000	9.77432	10.30204	1	False	0.93596
536842	0.62000	0.60000	11.77808	11.98661	1	False	-0.23288
536846	0.69000	0.68000	11.01660	11.12920	1	False	-0.61490
536856	0.37000	0.38000	14.32741	14.22192	1	False	-1.17770
536858	0.31000	0.29000	14.98340	15.21354	1	False	-0.07847
536931	0.55500	0.61000	12.44678	11.88272	2	False	0.60881
536933	0.81000	0.79000	9.48841	9.77432	1	False	0.00976
536935	0.79000	0.82000	9.77432	9.33854	1	False	0.18113
536939	0.67000	0.74000	11.24035	10.42662	1	False	1.58560
536941	0.69000	0.72000	11.01660	10.66863	1	False	-0.18085
536953	0.74000	0.80000	10.42662	9.63352	1	False	1.52549
546209	0.59000	0.58000	12.08982	12.19243	1	False	-0.62875
546211	0.66000	0.65000	11.35015	11.45872	1	False	-0.62273
546213	0.72000	0.68000	10.66863	11.12920	1	False	0.70070
546215	0.49500	0.46500	13.05013	13.35138	2	False	0.14840
546223	0.92000	0.91000	7.37971	7.63698	1	False	-0.14668
546225	0.64000	0.63000	11.56616	11.67259	1	False	-0.62604
553108	0.50000	0.51500	13.00000	12.84957	2	False	-0.97684
553110	0.44000	0.45000	13.60388	13.50265	1	False	-1.17758
553112	0.45000	0.45000	13.50265	13.50265	1	False	-0.98715
553114	0.65000	0.68000	11.45872	11.12920	1	False	-0.26099
553116	0.76000	0.75000	10.17479	10.30204	1	False	-0.57817
553120	0.59000	0.54000	12.08982	12.59827	1	False	0.91482
553122	0.44000	0.48000	13.60388	13.20061	1	False	-0.02884
553128	0.49000	0.49000	13.10028	13.10028	1	False	-0.99622
553130	0.48000	0.51000	13.20061	12.89972	1	False	-0.40912
553134	0.20750	0.26000	16.26051	15.57338	4	False	0.99092

Table 2.5.4 (continued)

Delta Analysis

English Language Arts Grade 6

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
559980	0.71000	0.76000	10.78646	10.17479	1	False	0.82732
559984	0.69000	0.70000	11.01660	10.90240	1	False	-1.06994
559986	0.59000	0.59500	12.08982	12.03830	2	False	-1.21496
559988	0.69000	0.77000	11.01660	10.04461	1	False	2.19255
559992	0.76000	0.78000	10.17479	9.91123	1	False	-0.48289
559994	0.66000	0.72000	11.35015	10.66863	1	False	1.08025
560000	0.69000	0.70000	11.01660	10.90240	1	False	-1.06994
560002	0.45000	0.52000	13.50265	12.79939	2	False	1.11445
560004	0.17500	0.24000	16.73836	15.82521	4	False	1.83980

Table 2.5.5

Delta Analysis

English Language Arts Grade 7

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
409401	0.56000	0.53000	12.39612	12.69892	1	False	-0.38486
409409	0.49000	0.43000	13.10028	13.70550	1	False	0.49368
409464	0.42000	0.42000	13.80757	13.80757	1	False	-0.81946
409493	0.57000	0.52000	12.29450	12.79939	1	False	0.20344
409501	0.61000	0.53000	11.88272	12.69892	1	False	1.11029
409517	0.45500	0.36500	13.45215	14.38050	2	False	1.43324
477633	0.60000	0.59000	11.98661	12.08982	1	False	-0.96478
477635	0.56000	0.57000	12.39612	12.29450	1	False	-0.52681
477645	0.53000	0.55000	12.69892	12.49735	2	False	-0.23530
477647	0.66000	0.66000	11.35015	11.35015	1	False	-0.82481
477651	0.69000	0.67000	11.01660	11.24035	1	False	-0.61189
477655	0.61000	0.62000	11.88272	11.77808	1	False	-0.51912
477778	0.49500	0.47500	13.05013	13.25083	2	False	-0.68341
478253	0.67000	0.68000	11.24035	11.12920	1	False	-0.50162
478255	0.75500	0.73000	10.23876	10.54875	2	False	-0.35925
478259	0.29000	0.35500	15.21354	14.48742	4	False	1.29664
478261	0.71000	0.69000	10.78646	11.01660	1	False	-0.59280
478263	0.92000	0.93000	7.37971	7.09684	1	False	-0.01026
478265	0.53000	0.53000	12.69892	12.69892	1	False	-0.82187
478267	0.78000	0.79000	9.91123	9.77432	1	False	-0.42952
478269	0.50000	0.51000	13.00000	12.89972	1	False	-0.52941
478271	0.58000	0.62000	12.19243	11.77808	1	False	0.38281
478277	0.66000	0.67000	11.35015	11.24035	1	False	-0.50529
537742	0.77000	0.61000	10.04461	11.88272	1	True	4.08813
537760	0.67000	0.60000	11.24035	11.98661	1	False	0.90818
537778	0.65000	0.63000	11.45872	11.67259	1	False	-0.64161
537781	0.76000	0.70000	10.17479	10.90240	1	False	0.85621
537794	0.56000	0.56000	12.39612	12.39612	1	False	-0.82253
546829	0.73000	0.67000	10.54875	11.24035	1	False	0.75060
546837	0.59000	0.60000	12.08982	11.98661	1	False	-0.52286
546839	0.68000	0.64000	11.12920	11.56616	1	False	0.00832
546843	0.42500	0.43500	13.75647	13.65463	2	False	-0.52321
546849	0.39000	0.38000	14.11728	14.22192	1	False	-0.96524
546854	0.49000	0.48000	13.10028	13.20061	1	False	-0.97556
546940	0.50000	0.40000	13.00000	14.01339	1	False	1.68169
546945	0.54000	0.61500	12.59827	11.83050	2	False	1.41215
546948	0.68000	0.74000	11.12920	10.42662	1	False	1.21928
546952	0.49000	0.50000	13.10028	13.00000	1	False	-0.52919
546957	0.71000	0.78000	10.78646	9.91123	1	False	1.72095
546959	0.75000	0.78000	10.30204	9.91123	1	False	0.31020

Table 2.5.5 (continued)

Delta Analysis

English Language Arts Grade 7

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
552819	0.40500	0.40000	13.96170	14.01339	2	False	-0.96953
552823	0.35000	0.35000	14.54128	14.54128	1	False	-0.81786
552825	0.36000	0.38000	14.43384	14.22192	1	False	-0.20142
552827	0.71000	0.71000	10.78646	10.78646	1	False	-0.82604
552831	0.53000	0.54000	12.69892	12.59827	1	False	-0.52896
552839	0.62000	0.62000	11.77808	11.77808	1	False	-0.82388
552841	0.60000	0.64000	11.98661	11.56616	1	False	0.40010
552843	0.28000	0.33000	15.33137	14.75965	2	False	0.84758
552846	0.21000	0.19500	16.22568	16.43847	4	False	-0.65514

Table 2.5.6

Delta Analysis

English Language Arts Grade 8

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
402075	0.59000	0.61000	12.08982	11.88272	1	False	-0.53373
402077	0.35000	0.37000	14.54128	14.32741	1	False	-1.28798
402079	0.52500	0.53500	12.74917	12.64862	2	False	-1.19392
402111	0.84000	0.84000	9.02217	9.02217	1	False	-0.19540
402116	0.81000	0.80000	9.48841	9.63352	1	False	-0.93354
402118	0.67000	0.68000	11.24035	11.12920	1	False	-0.59018
420872	0.67000	0.67000	11.24035	11.24035	1	False	-1.02243
420905	0.39000	0.38000	14.11728	14.22192	1	False	-0.20733
420913	0.43000	0.42000	13.70550	13.80757	1	False	-0.37085
420925	0.53000	0.54000	12.69892	12.59827	1	False	-1.17478
420929	0.49000	0.51000	13.10028	12.89972	1	False	-0.93592
420946	0.69000	0.65000	11.01660	11.45872	1	False	-0.05092
420952	0.74000	0.73000	10.42662	10.54875	1	False	-1.19401
420970	0.69000	0.67000	11.01660	11.24035	1	False	-0.90019
420986	0.56000	0.55000	12.39612	12.49735	2	False	-0.86233
420990	0.34250	0.30750	14.62260	15.01180	4	False	1.08773
538612	0.56000	0.59000	12.39612	12.08982	1	False	-0.26210
538616	0.80000	0.84000	9.63352	9.02217	1	False	1.95426
538618	0.86000	0.88000	8.67872	8.30005	1	False	1.40534
538623	0.38000	0.39500	14.22192	14.06524	2	False	-1.18464
538625	0.52000	0.52000	12.79939	12.79939	1	False	-1.10567
538635	0.37000	0.43000	14.32741	13.70550	1	False	0.24529
546057	0.48500	0.42500	13.15043	13.75647	2	False	1.38217
546059	0.74000	0.65000	10.42662	11.45872	1	False	2.02361
546067	0.89000	0.84000	8.09389	9.02217	1	False	0.75010
546080	0.65000	0.68000	11.45872	11.12920	1	False	0.17767
546082	0.76000	0.67000	10.17479	11.24035	1	False	2.05983
546084	0.89000	0.85000	8.09389	8.85427	1	False	0.09712
548440	0.40000	0.39000	14.01339	14.11728	1	False	-0.24901
548448	0.38000	0.35000	14.22192	14.54128	1	False	0.66673
548458	0.66000	0.64000	11.35015	11.56616	1	False	-0.80589
548462	0.43000	0.45000	13.70550	13.50265	1	False	-1.15263
548467	0.59000	0.58000	12.08982	12.19243	1	False	-0.97118
553142	0.64000	0.60500	11.56616	11.93476	2	False	-0.13197
553144	0.67000	0.64000	11.24035	11.56616	1	False	-0.41981
553146	0.67000	0.65000	11.24035	11.45872	1	False	-0.83768
553152	0.75000	0.72000	10.30204	10.66863	1	False	-0.61107
553154	0.48000	0.42000	13.20061	13.80757	1	False	1.40445
553160	0.68000	0.61000	11.12920	11.88272	1	False	1.20213
553166	0.30000	0.33000	15.09760	14.75965	2	False	-1.14625

Table 2.5.6 (continued)

Delta Analysis

English Language Arts Grade 8

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
560466	0.50000	0.56000	13.00000	12.39612	2	False	0.67004
560476	0.66000	0.69000	11.35015	11.01660	1	False	0.23384
560483	0.40000	0.45000	14.01339	13.50265	1	False	-0.07000
560487	0.65000	0.69000	11.45872	11.01660	1	False	0.61560
560494	0.44000	0.48000	13.60388	13.20061	1	False	-0.33532
560500	0.66000	0.72000	11.35015	10.66863	1	False	1.58711
560504	0.31000	0.39000	14.98340	14.11728	1	False	0.95046
560508	0.30500	0.39000	15.04029	14.11728	2	False	1.15051
560510	0.20500	0.28500	16.29557	15.27221	4	False	1.07276

Table 2.5.7

Delta Analysis

Mathematics Grade 3

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
123876A	0.31000	0.31000	14.98340	14.98340	1	False	-0.63459
123978A	0.51000	0.65000	12.89972	11.45872	1	True	3.45238
124366A	0.55000	0.56000	12.49735	12.39612	1	False	-0.52147
125118A	0.58000	0.55000	12.19243	12.49735	1	False	-0.16481
125137A	0.51000	0.50000	12.89972	13.00000	1	False	-0.81985
125223A	0.59000	0.56000	12.08982	12.39612	1	False	-0.15313
125246A	0.41000	0.47000	13.91018	13.30108	1	False	1.07862
125260A	0.55000	0.54000	12.49735	12.59827	1	False	-0.78806
125291A	0.51000	0.52000	12.89972	12.79939	1	False	-0.49417
400041	0.43000	0.44000	13.70550	13.60388	1	False	-0.43048
401070	0.43000	0.55000	13.70550	12.49735	1	False	2.82681
411009	0.69000	0.69000	11.01660	11.01660	1	False	-0.92958
411119	0.61000	0.63000	11.88272	11.67259	1	False	-0.24659
411577	0.62000	0.64000	11.77808	11.56616	1	False	-0.24914
411588	0.53000	0.54000	12.69892	12.59827	1	False	-0.50817
411642	0.53000	0.44000	12.69892	13.60388	1	False	1.56384
411764	0.38000	0.38000	14.22192	14.22192	1	False	-0.69122
413036	0.46000	0.40000	13.40173	14.01339	1	False	0.64817
413163	0.59000	0.57000	12.08982	12.29450	1	False	-0.45227
414599	0.44000	0.42000	13.60388	13.80757	1	False	-0.56777
417021	0.82000	0.83000	9.33854	9.18334	1	False	-0.59750
462345	0.71000	0.69000	10.78646	11.01660	1	False	-0.28042
462586	0.71000	0.67000	10.78646	11.24035	1	False	0.37824
462666	0.74000	0.76000	10.42662	10.17479	1	False	-0.23214
462672	0.68000	0.65000	11.12920	11.45872	1	False	-0.01337
464204	0.61000	0.60000	11.88272	11.98661	1	False	-0.73358
464322	0.35000	0.28000	14.54128	15.33137	1	False	1.08868
532118	0.52000	0.48000	12.79939	13.20061	1	False	0.07354
532135	0.49000	0.49000	13.10028	13.10028	1	False	-0.77463
539890	0.43000	0.40000	13.70550	14.01339	1	False	-0.26861
539899	0.91000	0.90000	7.63698	7.87379	1	False	-0.02655
557244	0.24000	0.24000	15.82521	15.82521	1	False	-0.57199
557246	0.45000	0.41000	13.50265	13.91018	1	False	0.03980

Table 2.5.8

Delta Analysis

Mathematics Grade 4

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
124769A	0.52000	0.69000	12.79939	11.01660	1	True	3.69802
124781A	0.33000	0.31000	14.75965	14.98340	1	False	-0.36249
124856A	0.44000	0.42000	13.60388	13.80757	1	False	-0.39722
124951A	0.46000	0.43000	13.40173	13.70550	1	False	-0.13624
126341A	0.40000	0.36000	14.01339	14.43384	1	False	0.15564
126362A	0.46000	0.46000	13.40173	13.40173	1	False	-0.88992
126501A	0.62000	0.61000	11.77808	11.88272	1	False	-0.62581
127388A	0.36000	0.31000	14.43384	14.98340	1	False	0.48239
127466A	0.20000	0.23000	16.36648	15.95539	1	False	0.21360
127590A	0.32000	0.31000	14.87080	14.98340	1	False	-0.65069
127597A	0.31000	0.31000	14.98340	14.98340	1	False	-0.86669
400786	0.75000	0.70000	10.30204	10.90240	1	False	0.67402
400795	0.70000	0.70000	10.90240	10.90240	1	False	-0.88277
400798	0.32000	0.32000	14.87080	14.87080	1	False	-0.86835
400903	0.54000	0.52000	12.59827	12.79939	1	False	-0.38910
405640	0.75000	0.71000	10.30204	10.78646	1	False	0.37508
407497	0.40000	0.55000	14.01339	12.49735	1	True	3.02805
408032	0.68000	0.66000	11.12920	11.35015	1	False	-0.31642
408054	0.47000	0.49000	13.30108	13.10028	1	False	-0.37364
411556	0.63000	0.64000	11.67259	11.56616	1	False	-0.64090
411727	0.47000	0.49000	13.30108	13.10028	1	False	-0.37364
411832	0.58000	0.59000	12.19243	12.08982	1	False	-0.64311
413818	0.32000	0.32000	14.87080	14.87080	1	False	-0.86835
414743	0.42000	0.37000	13.80757	14.32741	1	False	0.41494
465876	0.31000	0.34000	14.98340	14.64985	1	False	-0.00666
476868	0.35000	0.37000	14.54128	14.32741	1	False	-0.32174
532523	0.32000	0.29000	14.87080	15.21354	1	False	-0.05730
540258	0.79000	0.82000	9.77432	9.33854	1	False	0.18044
540265	0.43000	0.45000	13.70550	13.50265	1	False	-0.36242
540312	0.35000	0.31000	14.54128	14.98340	1	False	0.20377
540326	0.83000	0.81000	9.18334	9.48841	1	False	-0.07092
560922	0.60000	0.54000	11.98661	12.59827	1	False	0.67841

Table 2.5.9

Delta Analysis

Mathematics Grade 5

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
124675A	0.44000	0.42000	13.60388	13.80757	1	False	-0.30609
124737A	0.58000	0.59000	12.19243	12.08982	1	False	-0.09863
124738A	0.37000	0.33000	14.32741	14.75965	1	False	0.61230
125071A	0.65000	0.58000	11.45872	12.19243	1	False	1.56097
125951A	0.50000	0.62000	13.00000	11.77808	1	True	4.10027
126058A	0.13000	0.13000	17.50556	17.50556	1	False	-0.81213
400076	0.37000	0.38000	14.32741	14.22192	1	False	-0.23442
400224	0.46000	0.46000	13.40173	13.40173	1	False	-0.57175
400639	0.45000	0.41000	13.50265	13.91018	1	False	0.46171
400711	0.82000	0.79000	9.33854	9.77432	1	False	0.28282
408459	0.28000	0.26000	15.33137	15.57338	1	False	-0.04171
408463	0.19000	0.23000	16.51159	15.95539	1	False	1.32854
410151	0.45000	0.44000	13.50265	13.60388	1	False	-0.70251
411149	0.50000	0.50000	13.00000	13.00000	1	False	-0.54413
411240	0.43000	0.42000	13.70550	13.80757	1	False	-0.68535
411295	0.76000	0.74000	10.17479	10.42662	1	False	-0.35886
413923	0.44000	0.43000	13.60388	13.70550	1	False	-0.69408
415312	0.56000	0.55000	12.39612	12.49735	1	False	-0.77857
464057	0.80000	0.80000	9.63352	9.63352	1	False	-0.31273
464086	0.45000	0.44000	13.50265	13.60388	1	False	-0.70251
466529	0.38000	0.43000	14.22192	13.70550	1	False	1.33476
466686	0.22000	0.20000	16.08877	16.36648	1	False	0.14604
532486	0.44000	0.38000	13.60388	14.22192	1	False	1.26880
532490	0.54000	0.52000	12.59827	12.79939	1	False	-0.38501
532496	0.65000	0.65000	11.45872	11.45872	1	False	-0.43819
532498	0.62000	0.61000	11.77808	11.88272	1	False	-0.80807
539177	0.66000	0.67000	11.35015	11.24035	1	False	-0.01339
539188	0.52000	0.49000	12.79939	13.10028	1	False	0.00803
539225	0.27000	0.27000	15.45125	15.45125	1	False	-0.71263
540637	0.81000	0.80000	9.48841	9.63352	1	False	-0.81170
558689	0.71000	0.69000	10.78646	11.01660	1	False	-0.39926
558693	0.59000	0.60000	12.08982	11.98661	1	False	-0.08928
558705	0.35000	0.34000	14.54128	14.64985	1	False	-0.60322

Table 2.5.10

Delta Analysis

Mathematics Grade 6

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
124799A	0.74000	0.67000	10.42662	11.24035	1	False	1.61967
125464A	0.79000	0.80000	9.77432	9.63352	1	False	-0.50585
125837A	0.80000	0.91000	9.63352	7.63698	1	False	2.96922
125839A	0.67000	0.65000	11.24035	11.45872	1	False	-0.03681
400114	0.41000	0.48000	13.91018	13.20061	1	False	1.02399
400238	0.45000	0.46000	13.50265	13.40173	1	False	-0.55450
400411	0.44000	0.42000	13.60388	13.80757	1	False	-0.71267
400688	0.45000	0.45000	13.50265	13.50265	1	False	-0.79789
406039	0.39000	0.38000	14.11728	14.22192	1	False	-0.88374
410187	0.17000	0.19000	16.81666	16.51159	1	False	0.83597
412050	0.70000	0.68000	10.90240	11.12920	1	False	0.07511
412181	0.43000	0.42000	13.70550	13.80757	1	False	-0.98531
412273	0.36000	0.35000	14.43384	14.54128	1	False	-0.80471
412393	0.26000	0.25000	15.57338	15.69796	1	False	-0.53724
412411	0.66000	0.68000	11.35015	11.12920	1	False	-0.84826
412462	0.61000	0.62000	11.88272	11.77808	1	False	-0.98445
414069	0.35000	0.33000	14.54128	14.75965	1	False	-0.93130
415140	0.50000	0.45000	13.00000	13.50265	1	False	0.17202
415153	0.62000	0.60000	11.77808	11.98661	1	False	-0.20625
415230	0.21000	0.24000	16.22568	15.82521	1	False	0.90593
419551	0.74000	0.66000	10.42662	11.35015	1	False	1.88450
464562	0.53000	0.50000	12.69892	13.00000	1	False	-0.23257
464839	0.41000	0.42000	13.91018	13.80757	1	False	-0.43997
464910	0.33000	0.33000	14.75965	14.75965	1	False	-0.45726
474350	0.58000	0.50000	12.19243	13.00000	1	False	1.12633
532622	0.64000	0.64000	11.56616	11.56616	1	False	-0.65180
539595	0.38000	0.34000	14.22192	14.64985	1	False	-0.33931
539597	0.47000	0.45000	13.30108	13.50265	1	False	-0.63576
539618	0.40000	0.35000	14.01339	14.54128	1	False	-0.04169
539622	0.45000	0.40000	13.50265	14.01339	1	False	0.05534
539643	0.23000	0.21000	15.95539	16.22568	1	False	-0.78519
539781	0.42000	0.37000	13.80757	14.32741	1	False	-0.00535
539791	0.63000	0.75000	11.67259	10.30204	1	False	2.01190
539793	0.73000	0.82000	10.54875	9.33854	1	False	1.32064
540727	0.37000	0.35000	14.32741	14.54128	1	False	-0.88420
558385	0.31000	0.28000	14.98340	15.33137	1	False	-0.73853

Table 2.5.11

Delta Analysis

Mathematics Grade 7

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
124350A	0.36000	0.50000	14.43384	13.00000	1	True	4.33361
124359A	0.58000	0.58000	12.19243	12.19243	1	False	-0.39247
124361A	0.40000	0.38000	14.01339	14.22192	1	False	-0.68439
124504A	0.43000	0.45000	13.70550	13.50265	1	False	0.13338
124508A	0.77000	0.73000	10.04461	10.54875	1	False	-0.12866
124648A	0.47000	0.43000	13.30108	13.70550	1	False	-0.08721
124652A	0.41000	0.40000	13.91018	14.01339	1	False	-0.95697
400327	0.29000	0.29000	15.21354	15.21354	1	False	-0.75311
400877	0.64000	0.65000	11.56616	11.45872	1	False	0.05650
400884	0.38000	0.37000	14.22192	14.32741	1	False	-1.00213
408770	0.64000	0.64000	11.56616	11.56616	1	False	-0.31771
408783	0.40000	0.39000	14.01339	14.11728	1	False	-0.97166
410251	0.57000	0.58000	12.29450	12.19243	1	False	-0.04915
412048	0.57000	0.54000	12.29450	12.59827	1	False	-0.55793
412197	0.49000	0.48000	13.10028	13.20061	1	False	-0.85029
412200	0.56000	0.59000	12.39612	12.08982	1	False	0.64998
412224	0.59000	0.53000	12.08982	12.69892	1	False	0.48105
412251	0.72000	0.71000	10.66863	10.78646	1	False	-0.62093
412263	0.83000	0.78000	9.18334	9.91123	1	False	0.54779
412395	0.31000	0.27000	14.98340	15.45125	1	False	0.33453
467173	0.21000	0.20000	16.22568	16.36648	1	False	-0.65620
467221	0.52000	0.51000	12.79939	12.89972	1	False	-0.81438
467737	0.49000	0.43000	13.10028	13.70550	1	False	0.58816
467772	0.27000	0.31000	15.45125	14.98340	1	False	0.84790
467828	0.65000	0.63000	11.45872	11.67259	1	False	-0.97077
467844	0.36000	0.40000	14.43384	14.01339	1	False	0.80426
467858	0.21000	0.20000	16.22568	16.36648	1	False	-0.65620
467883	0.19000	0.19000	16.51159	16.51159	1	False	-0.90807
532217	0.13000	0.16000	17.50556	16.97783	1	False	0.81123
539407	0.51000	0.46000	12.89972	13.40173	1	False	0.20477
539434	0.49000	0.43000	13.10028	13.70550	1	False	0.58816
539440	0.48000	0.46000	13.20061	13.40173	1	False	-0.80723
539442	0.24000	0.20000	15.82521	16.36648	1	False	0.69074
557940	0.45000	0.43000	13.50265	13.70550	1	False	-0.76515
557950	0.15000	0.12000	17.14573	17.69995	1	False	0.89344
557952	0.47000	0.40000	13.30108	14.01339	1	False	0.98509

Table 2.5.12

Delta Analysis

Mathematics Grade 8

Item Id	Old P	New P	Old Delta	New Delta	Max	Discard	Std Dist
126278A	0.55000	0.48000	12.49735	13.20061	1	False	1.29162
126281A	0.40000	0.44000	14.01339	13.60388	1	False	0.37394
126883A	0.55000	0.55000	12.49735	12.49735	1	False	-0.89101
127152A	0.43000	0.43000	13.70550	13.70550	1	False	-1.14850
127742A	0.41000	0.44000	13.91018	13.60388	1	False	-0.00430
127837A	0.78000	0.74000	9.91123	10.42662	1	False	0.01190
400370	0.39000	0.38000	14.11728	14.22192	1	False	-0.68452
400985	0.35000	0.37000	14.54128	14.32741	1	False	-0.49726
408524	0.47000	0.46000	13.30108	13.40173	1	False	-0.87395
408651	0.30000	0.31000	15.09760	14.98340	1	False	-1.00233
409018	0.27000	0.26000	15.45125	15.57338	1	False	-0.33242
409020	0.45000	0.44000	13.50265	13.60388	1	False	-0.82876
412467	0.54000	0.55000	12.59827	12.49735	1	False	-0.52120
412575	0.37000	0.38000	14.32741	14.22192	1	False	-0.87196
412833	0.43000	0.40000	13.70550	14.01339	1	False	0.01589
413063	0.82000	0.87000	9.33854	8.49444	1	True	3.05559
413137	0.23000	0.26000	15.95539	15.57338	1	False	-0.14661
413229	0.78000	0.76000	9.91123	10.17479	1	False	-0.96467
414834	0.27000	0.28000	15.45125	15.33137	1	False	-1.05565
414849	0.38000	0.36000	14.22192	14.43384	1	False	-0.24625
414896	0.47000	0.38000	13.30108	14.22192	1	False	2.30669
468276	0.82000	0.78000	9.33854	9.91123	1	False	0.11204
468379	0.47000	0.43000	13.30108	13.70550	1	False	0.30402
468386	0.21000	0.20000	16.22568	16.36648	1	False	-0.09497
468707	0.25000	0.27000	15.69796	15.45125	1	False	-0.61643
468754	0.59000	0.59000	12.08982	12.08982	1	False	-0.80416
483010	0.63000	0.61000	11.67259	11.88272	1	False	-0.79646
483259	0.53000	0.55000	12.69892	12.49735	1	False	-0.15231
532395	0.42000	0.38000	13.80757	14.22192	1	False	0.45048
540824	0.42000	0.39000	13.80757	14.11728	1	False	0.04466
540838	0.39000	0.47000	14.11728	13.30108	1	False	1.92890
540848	0.15000	0.17000	17.14573	16.81666	1	False	-0.60558
540850	0.36000	0.38000	14.43384	14.22192	1	False	-0.48194
540876	0.41000	0.37000	13.91018	14.32741	1	False	0.48353
540892	0.87000	0.83000	8.49444	9.18334	1	False	0.38282
540915	0.56000	0.61000	12.39612	11.88272	1	False	1.12149
540951	0.22000	0.29000	16.08877	15.21354	1	False	1.73767

Section 2.6

Tabled B/B Analysis Results

Table 2.6.1

b/b Analysis

English Language Arts Grade 3

Item Id	Old b	New b	Std Dist	Flag
130312A	-0.66202	-0.67829	-0.38865	False
130319A	-0.42295	-0.40751	-0.26906	False
130325A	0.80622	0.90503	0.10169	False
130326A	-0.17157	-0.20712	-0.40176	False
130328A	-0.77615	-0.84768	-0.56871	False
410572	1.42670	1.16839	-0.56534	False
410580	2.95668	2.26234	0.62750	False
422166	0.55611	0.52977	-0.30530	False
474429	0.91240	1.06454	0.27508	False
474695	0.68441	0.65593	-0.29983	False
474704	0.68734	0.74467	-0.03658	False
474706	0.62416	0.68858	-0.02077	False
474708	1.62872	1.93361	0.81037	False
543241	-0.45495	-0.76611	-0.22695	False
543243	1.27060	1.18910	-0.40736	False
543247	-0.24001	-0.12926	0.04019	False
543249	0.99270	0.69931	-0.41714	False
543253	-0.22384	-0.74272	0.38798	False
543259	0.62641	0.43283	-0.68868	False
543524	1.14102	1.73364	1.64644	False
543530	0.50393	0.28197	-0.59022	False
543532	-0.85602	-0.77095	-0.09627	False
543534	-0.42207	-0.23540	0.25579	False
543542	1.20443	1.22713	-0.09423	False
543546	-0.73355	-0.47945	0.43323	False
543555	-0.34605	-0.44422	-0.61002	False
543557	1.47370	1.46610	-0.16184	False
543565	-0.89018	-1.05695	-0.62865	False
543571	-1.30577	-1.50799	-0.48104	False
543575	-0.45302	-0.71759	-0.36991	False
543577	-0.85143	-1.00452	-0.67420	False
552223	-0.34234	-0.18888	0.16149	False
552233	-0.45346	-0.40675	-0.17609	False
552235	-0.68028	-0.79780	-0.70066	False
552247	-0.18209	-0.13174	-0.13949	False
552251	-0.37057	-0.89814	0.42837	False
552255	-0.41948	-0.28015	0.11095	False
552261	1.70961	1.29246	-0.10507	False
559821	0.51975	0.06272	0.12871	False
559830	-0.47512	-0.74226	-0.35996	False

Table 2.6.1 (continued)

b/b Analysis

English Language Arts Grade 3

Item Id	Old b	New b	Std Dist	Flag
559835	1.34917	0.73284	0.53915	False
559838	1.31786	1.27531	-0.28356	False
559841	-0.45833	-0.67579	-0.51379	False
559845	0.55472	0.38246	-0.74729	False
559847	0.47585	0.22515	-0.49951	False
559849	1.19471	0.96810	-0.64073	False
559851	1.85826	1.34115	0.18734	False
568986	-0.04359	-0.52871	0.26761	False
569376	1.68726	-0.74307	6.06675	True

Table 2.6.2

b/b Analysis

English Language Arts Grade 4

Item Id	Old b	New b	Std Dist	Flag
420698	0.77808	0.76958	-0.34587	False
420714	0.11695	0.05225	-0.29064	False
420723	0.05144	-0.03778	-0.39537	False
420785	-1.59579	-1.76435	0.09513	False
420820	0.68077	0.00197	1.07663	False
422664	-0.40597	-0.55499	-0.47880	False
476097	-0.16954	-0.21491	-0.01267	False
476102	2.00119	1.78388	-0.84400	False
476121	-0.47493	-0.47396	0.43328	False
476151	1.22112	1.31082	-0.03083	False
476172	0.65113	0.59327	-0.55955	False
476177	-0.85382	-0.90191	0.36693	False
486800	0.10959	0.07553	-0.10820	False
543932	0.94117	0.98183	-0.15424	False
543940	1.39731	1.40783	-0.59309	False
543942	0.32562	0.49103	0.92692	False
543944	-1.26057	-1.29035	0.70846	False
543946	2.34907	2.03990	-0.10879	False
543950	0.81880	0.29323	0.26533	False
544002	0.37674	0.34582	-0.24432	False
544006	0.29096	0.40090	0.62438	False
544014	0.09006	-0.66313	1.16787	False
544034	1.15831	0.93915	-1.32032	False
544036	-0.32511	-0.50212	-0.68829	False
544453	-0.37805	-0.51311	-0.41375	False
544455	-0.34354	-0.30180	0.59444	False
544457	0.10468	-0.77481	1.91078	False
544460	-0.22789	-1.04053	1.32985	False
544476	-1.23690	-1.44145	-0.32155	False
544483	0.91829	0.81388	-0.98463	False
552900	-0.75761	-0.93244	-0.42569	False
552906	0.64379	0.25115	-0.60882	False
552908	-0.28711	-0.72543	-0.88112	False
552910	-1.26443	-2.16159	1.22237	False
552912	-0.32302	-0.91921	0.01618	False
552916	1.22504	0.10198	3.97461	True
552918	0.53872	0.33539	-1.34053	False
552922	0.78365	0.34684	-0.27114	False
552927	0.01754	-0.12562	-0.68945	False
552931	0.20744	-0.04873	-1.45637	False

Table 2.6.2 (continued)

b/b Analysis

English Language Arts Grade 4

Item Id	Old b	New b	Std Dist	Flag
552933	-0.18845	-1.09273	1.88555	False
552938	1.26863	1.26264	-0.61474	False
552940	-0.14693	-0.70654	-0.09479	False
552944	0.34496	-0.10142	-0.46899	False
552946	0.07840	-0.19740	-1.49595	False
552948	0.28503	-0.30021	0.30387	False
552950	1.32942	1.32167	-0.66011	False

Table 2.6.3

b/b Analysis

English Language Arts Grade 5

Item Id	Old b	New b	Std Dist	Flag
131427A	1.23754	1.05387	-0.05574	False
131429A	2.51322	2.34767	0.58033	False
131430A	0.60679	0.71493	-0.40162	False
131431A	-0.36713	-0.43107	-0.55963	False
131437A	1.11164	1.10384	-0.84108	False
131440A	1.12995	1.10667	-0.76794	False
131444A	-0.70481	-0.75718	-0.32469	False
131445A	-0.12272	-0.31052	-0.79577	False
131452A	-0.64248	-0.71320	-0.43401	False
131484A	1.17508	1.55220	0.37619	False
459808	0.72881	-0.17007	2.57011	False
459811	-0.07970	-0.20152	-0.95496	False
459819	-0.80928	-0.85048	-0.22114	False
459823	-0.58671	-0.84655	-0.76092	False
459830	2.06782	1.79079	0.78593	False
536024	0.61742	0.38445	-0.20025	False
536026	-0.35220	-0.60541	-0.65741	False
536034	-0.04006	-0.18660	-0.91759	False
536040	-0.34233	-0.54283	-0.86630	False
536046	-0.02789	-0.41126	0.05242	False
536048	1.45198	1.88523	0.45042	False
536061	-1.05253	-1.21594	-0.58285	False
536068	1.13493	1.23780	-0.71690	False
536070	3.29157	3.22992	0.59081	False
536072	-0.16198	-0.57895	0.11447	False
536076	-0.54323	-0.76433	-0.89429	False
536078	0.81568	0.81487	-0.96096	False
545263	-0.69679	-0.87764	-0.85171	False
545265	0.65392	0.77146	-0.38961	False
545273	0.88719	1.00851	-0.50402	False
545279	-0.51211	-0.69621	-0.96768	False
545281	0.62380	0.72941	-0.42137	False
545283	0.50842	0.89625	0.79066	False
552537	1.08460	-0.00026	3.52448	True
552544	-0.92859	-1.55083	0.52281	False
552552	-0.59470	-1.15787	0.46833	False
552554	-0.62471	-1.00191	-0.30474	False
552556	0.36923	0.81076	1.08652	False
552561	0.56421	1.32202	2.26440	False
552563	0.56909	1.31363	2.20772	False

Table 2.6.3 (continued)

b/b Analysis

English Language Arts Grade 5

Item Id	Old b	New b	Std Dist	Flag
560295	0.07393	0.27520	0.27363	False
560301	-0.86885	-0.75035	0.46154	False
560306	-0.31920	-0.81467	0.34627	False
560314	0.51837	0.48382	-0.93277	False
560316	-0.98205	-1.04697	-0.22148	False
560318	-0.49184	-0.55619	-0.49191	False
560333	1.49499	1.70839	-0.46769	False

Table 2.6.4

b/b Analysis

English Language Arts Grade 6

Item Id	Old b	New b	Std Dist	Flag
130154A	1.77005	1.69099	-0.88023	False
130167A	0.67252	0.62325	-0.37271	False
130168A	0.66391	0.66940	-0.13709	False
130171A	-1.18410	-0.95398	2.17290	False
130173A	-0.29638	-0.35218	0.31804	False
130184A	1.37902	1.85309	1.29451	False
409362	-0.65675	0.03537	3.71611	True
409385	0.83458	0.77676	-0.52861	False
409396	0.13769	0.06672	-0.06717	False
409447	1.33508	1.19409	-0.94334	False
409458	0.26392	0.15780	-0.30787	False
409472	0.30889	0.09741	-0.78226	False
471626	2.02877	1.72377	0.25737	False
536840	-0.98374	-1.20138	0.14997	False
536842	0.47776	0.11831	-0.66421	False
536846	-0.09611	-0.61533	-0.42069	False
536856	1.39483	1.46953	-0.38907	False
536858	1.20616	1.09900	-1.01055	False
536931	-0.03666	-0.50275	-0.59904	False
536933	-0.58999	-1.03482	-1.09293	False
536935	-1.04970	-2.04786	0.87753	False
536939	-0.17250	-1.12658	1.34313	False
536941	0.04632	-0.40473	-0.60051	False
536953	-0.30079	-0.92257	-0.14304	False
546209	0.23815	-0.13619	-0.77946	False
546211	0.01973	-0.29624	-1.00538	False
546213	-0.19328	-0.34342	-0.15330	False
546215	0.12018	0.20914	0.61532	False
546223	-2.26232	-2.29627	1.86655	False
546225	0.16993	-0.47033	0.28319	False
553108	0.18043	-0.09455	-0.95288	False
553110	1.08712	0.90861	-0.97005	False
553112	1.25763	1.22807	-0.72385	False
553114	-0.27065	-0.81635	-0.43920	False
553116	-0.39023	-0.69196	-0.64193	False
553120	0.41739	-0.29283	0.75946	False
553122	0.73538	0.41307	-0.62875	False
553128	1.13841	0.48137	1.07121	False
553130	0.73158	0.18426	0.31038	False
559980	-0.15495	-0.64279	-0.59566	False

Table 2.6.4 (continued)

b/b Analysis

English Language Arts Grade 6

Item Id	Old b	New b	Std Dist	Flag
559984	-0.27864	-0.85565	-0.31405	False
559986	-0.26464	-0.48946	-0.41304	False
559988	-0.22101	-0.88233	0.08161	False
559992	-0.92066	-2.13053	1.85944	False
559994	-0.00581	-0.56789	-0.17434	False
560000	-0.07431	-0.40732	-1.00701	False
560002	0.52620	-0.16524	0.76149	False

Table 2.6.5

b/b Analysis

English Language Arts Grade 7

Item Id	Old b	New b	Std Dist	Flag
409401	0.33493	0.39295	0.30565	False
409409	0.76353	0.54358	-0.94236	False
409464	1.14104	0.90878	-0.89951	False
409493	0.93055	0.57832	-0.47206	False
409501	0.15372	0.33070	0.83913	False
409517	0.75915	0.68886	-0.33408	False
477633	-0.21174	-0.22284	0.17898	False
477635	0.53212	0.37736	-0.61288	False
477645	-0.01774	-0.20308	-0.58233	False
477647	-0.40264	-0.57973	-0.44065	False
477651	-0.58557	-0.50602	0.65178	False
477655	0.34197	0.18396	-0.57260	False
477778	0.16962	0.13755	-0.01330	False
478253	-0.00784	-0.62132	0.32381	False
478255	-1.05522	-1.06599	0.41746	False
478259	1.18795	0.69328	0.17808	False
478261	-0.09856	-0.34339	-0.80091	False
478263	-1.47676	-1.94048	-0.69664	False
478265	0.53114	0.24356	-0.84659	False
478267	-0.55234	-0.98947	-0.54459	False
478269	0.77163	0.52293	-0.93668	False
478271	0.69434	-0.32902	2.18380	False
478277	-0.16095	-0.62064	-0.34305	False
537742	-0.97488	-0.46999	2.48651	False
537760	-0.19667	-0.16794	0.33630	False
537778	-0.05773	-0.20473	-0.41557	False
537781	-0.62845	-0.37470	1.37043	False
537794	0.78940	0.41394	-0.41752	False
546829	-0.54187	-0.62728	-0.02963	False
546837	0.24469	-0.40402	0.53771	False
546839	-0.02107	-0.14115	-0.31668	False
546843	0.74899	0.39168	-0.50250	False
546849	1.30249	1.15128	-0.81507	False
546854	0.87350	0.69127	-0.82028	False
546940	0.54657	0.67884	0.54732	False
546945	0.08172	-0.55112	0.42752	False
546948	-0.18979	-1.81395	4.37221	True
546952	0.62003	0.34060	-0.85466	False
546957	-0.38355	-0.93220	-0.04479	False
546959	-0.74027	-1.47978	0.62910	False

Table 2.6.5 (continued)

b/b Analysis

English Language Arts Grade 7

Item Id	Old b	New b	Std Dist	Flag
552819	1.13538	1.10445	-0.28020	False
552823	1.32328	0.98002	-0.39803	False
552825	1.84262	1.51723	-0.32450	False
552827	-0.31627	-0.41745	-0.15702	False
552831	0.74936	0.05070	0.88220	False
552839	0.13663	-0.16405	-0.90437	False
552841	0.21175	-0.07033	-0.95869	False
552843	1.22237	0.87020	-0.39026	False

Table 2.6.6

b/b Analysis

English Language Arts Grade 8

Item Id	Old b	New b	Std Dist	Flag
402075	-0.45322	-0.48309	0.47880	False
402077	1.40455	1.12367	-0.86729	False
402079	0.07221	-0.18194	-1.29513	False
402111	-1.66755	-2.00218	-1.21187	False
402116	-1.02750	-1.24499	-0.62672	False
402118	-0.20899	-0.62596	-0.51222	False
420872	-0.64457	-0.88413	-0.92493	False
420905	0.95149	0.89249	-0.25049	False
420913	0.89386	0.72088	-1.03082	False
420925	0.30239	0.20272	-0.29430	False
420929	1.35346	0.74058	1.44923	False
420946	-0.20851	-0.32374	-0.21305	False
420952	-0.88118	-1.22542	-1.27480	False
420970	-0.64207	-0.81947	-0.48857	False
420986	-0.11342	-0.29250	-0.69773	False
420990	0.96638	0.96758	0.16746	False
538612	0.45796	0.02517	-0.15197	False
538616	-0.33032	-1.22866	2.82889	False
538618	-0.94004	-1.69860	1.61795	False
538623	1.20930	1.24533	0.32180	False
538625	0.61133	0.57777	0.05546	False
538635	1.02771	0.54021	0.44560	False
546057	0.32848	0.39277	0.84941	False
546059	-0.30722	-0.13408	1.85246	False
546067	-0.91106	-1.03586	-0.01812	False
546080	0.22161	-0.28727	0.29509	False
546082	-0.38101	-0.38927	0.60387	False
546084	-1.35447	-1.44232	0.40734	False
548440	1.52233	1.67327	1.01334	False
548448	1.09576	0.92097	-1.11892	False
548458	0.04774	-0.30705	-0.85382	False
548462	1.07489	0.80837	-1.09137	False
548467	0.21578	-0.14466	-0.75135	False
553142	-0.28071	-0.37928	-0.06890	False
553144	-0.26044	-0.26810	0.56308	False
553146	-0.02119	-0.21407	-0.82924	False
553152	-0.22739	-0.40844	-0.66904	False
553154	0.83927	0.67547	-0.94586	False
553160	-0.06603	-0.15263	-0.06483	False
553166	1.15614	0.78715	-0.34017	False

Table 2.6.6 (continued)

b/b Analysis

English Language Arts Grade 8

Item Id	Old b	New b	Std Dist	Flag
560466	0.23270	-0.44152	1.46239	False
560476	0.13996	-0.10562	-1.26013	False
560483	1.20517	0.79480	-0.03077	False
560487	-0.08863	-0.85546	1.99395	False
560494	1.16475	0.69345	0.38278	False
560500	0.04150	-0.63857	1.43217	False
560504	1.80583	1.61257	-1.33390	False
560508	1.09216	0.52995	0.99523	False

Table 2.6.7

b/b Analysis

Mathematics Grade 3

Item Id	Old b	New b	Std Dist	Flag
123876A	0.67174	0.76686	-0.68950	False
123978A	0.01286	-0.43325	2.09274	False
124366A	0.17973	0.27067	-0.45912	False
125118A	-0.00290	0.11984	-0.11172	False
125137A	0.53637	0.26305	1.01599	False
125223A	0.15956	0.23946	-0.53502	False
125246A	1.15902	0.67406	3.01094	True
125260A	0.43551	0.51218	-0.70800	False
125291A	1.03863	1.04253	-0.89215	False
400041	1.30158	1.25552	-0.35918	False
401070	0.14552	0.17702	-0.90756	False
411009	-0.73749	-0.61962	0.24300	False
411119	-0.07988	-0.36231	0.75787	False
411577	-0.11346	-0.34452	0.33653	False
411588	0.32647	0.33983	-1.14680	False
411642	0.43731	0.65381	0.38902	False
411764	1.08064	1.04379	-0.54969	False
413036	0.82225	0.96480	-0.39758	False
413163	0.11905	0.13639	-1.00459	False
414599	1.71918	1.70289	-0.36956	False
417021	-0.74014	-1.14977	1.40348	False
462345	-0.47621	-0.54939	-1.09725	False
462586	-0.50285	-0.20696	1.51535	False
462666	-0.87740	-0.72714	0.57218	False
462672	-0.33173	-0.38015	-1.21438	False
464204	-0.09475	-0.05872	-0.74346	False
464322	1.00099	1.28877	0.64720	False
532118	0.81591	0.92713	-0.64020	False
532135	0.44492	0.67383	0.48240	False
539890	1.12120	1.22934	-0.82770	False
539899	-1.54377	-1.59720	-0.67079	False
557244	1.48112	1.79917	0.62805	False
557246	0.99717	0.85540	0.22952	False

Table 2.6.8

b/b Analysis

Mathematics Grade 4

Item Id	Old b	New b	Std Dist	Flag
124769A	-0.20898	-0.46481	-0.66564	False
124781A	1.41859	1.21386	0.16235	False
124856A	0.76325	0.79970	-1.09659	False
124951A	0.93146	1.32189	-0.24816	False
126341A	1.73269	1.55269	0.51360	False
126362A	0.97397	0.27820	1.05241	False
126501A	-0.14795	-0.13906	0.05679	False
127388A	1.17194	1.39381	-1.08745	False
127466A	1.87354	1.68187	0.74035	False
127590A	1.04053	1.05321	-1.01234	False
127597A	1.67308	1.66316	-0.08473	False
400786	-1.94551	-2.33232	1.29375	False
400795	-0.10645	-1.08867	0.45683	False
400798	1.42362	1.32260	-0.14631	False
400903	0.74977	0.74314	-1.20934	False
405640	-0.60161	-0.93205	-0.35950	False
407497	0.69542	0.61278	-1.19096	False
408032	-0.57171	-0.41438	1.08372	False
408054	0.36784	0.25990	-0.99895	False
411556	0.09043	-0.07970	-0.81147	False
411727	0.55614	0.06742	-0.14476	False
411832	0.47674	-0.44520	1.06530	False
413818	1.37035	1.44334	-0.74798	False
414743	0.66763	0.96226	-0.18137	False
465876	1.84444	3.62260	2.73373	False
476868	1.85339	1.48952	1.23683	False
532523	2.16353	3.89776	2.16684	False
540258	-0.65415	-1.67913	-0.15676	False
540265	0.79269	0.60292	-0.73300	False
540312	1.30452	1.43453	-1.01082	False
540326	-1.11941	-1.75635	-0.58882	False
560922	0.19922	0.31562	-0.08755	False

Table 2.6.9

b/b Analysis

Mathematics Grade 5

Item Id	Old b	New b	Std Dist	Flag
124675A	0.69577	0.85775	0.16670	False
124737A	0.31719	0.20847	-0.84409	False
124738A	1.53208	1.38048	0.50809	False
125071A	0.14738	0.22778	-0.03384	False
125951A	0.04500	-0.34557	1.19446	False
126058A	2.32764	2.35111	-0.23851	False
400076	1.91992	1.75046	0.97326	False
400224	1.80483	1.63448	0.88495	False
400639	1.47986	1.57747	-1.00080	False
400711	-0.80863	-1.04729	-0.73398	False
408459	1.88973	2.24705	0.74569	False
408463	1.90204	1.87579	-0.19208	False
410151	1.23203	1.24117	-1.03214	False
411149	0.39044	0.44776	-0.42086	False
411240	0.48825	0.53404	-0.59462	False
411295	-0.54586	-0.59650	-0.51158	False
413923	0.35681	0.39957	-0.50994	False
415312	0.35863	0.46402	-0.00830	False
464057	-1.09303	-1.18471	-0.38744	False
464086	0.82666	0.76321	-0.78520	False
466529	0.74522	0.41611	1.28150	False
466686	1.17062	1.35992	-0.00768	False
532486	0.72625	0.90168	0.24947	False
532490	0.41578	0.37982	-1.19127	False
532496	-0.15955	-0.33280	-0.72110	False
532498	-0.05392	-0.06803	-0.62614	False
539177	0.05748	-0.69926	4.14654	True
539188	1.49723	1.73594	0.11836	False
539225	1.31761	1.59431	0.57255	False
540637	-1.19405	-1.23634	0.09314	False
558689	-0.30079	-0.39280	-1.04721	False
558693	0.14299	0.19762	-0.23723	False
558705	1.22836	1.44814	0.18929	False

Table 2.6.10

b/b Analysis

Mathematics Grade 6

Item Id	Old b	New b	Std Dist	Flag
124799A	-0.51056	-0.48820	-0.67808	False
125464A	-1.20885	-1.04732	-0.27766	False
125837A	-1.43655	-1.78159	1.21291	False
125839A	-0.83964	-0.61486	0.02516	False
400114	0.43747	0.37152	-0.09676	False
400238	1.82390	1.93279	-0.89145	False
400411	0.32977	0.84453	1.47017	False
400688	0.18751	0.30267	-0.68023	False
406039	0.97024	1.13708	-0.48491	False
410187	2.76162	2.81409	-0.48686	False
412050	-0.56171	-0.32511	0.05912	False
412181	1.99178	2.09836	-0.86351	False
412273	1.07230	1.10692	-0.57308	False
412393	1.54829	1.47867	0.04345	False
412411	-0.14548	-0.19194	-0.26554	False
412462	-0.20664	-0.09636	-0.66399	False
414069	1.84962	1.95648	-0.88043	False
415140	1.43702	0.58961	4.24698	True
415153	0.09739	0.30247	-0.18311	False
415230	1.49045	1.50416	-0.41446	False
419551	-0.62905	-0.11443	1.57327	False
464562	0.70348	0.67349	-0.26285	False
464839	1.22906	1.09548	0.35553	False
464910	2.23803	2.25461	-0.34905	False
474350	0.19232	0.58014	0.79705	False
532622	-0.39132	-0.42329	-0.37070	False
539595	0.95379	1.39748	1.01739	False
539597	0.59888	0.68903	-0.86034	False
539618	1.01406	1.18461	-0.46954	False
539622	0.94582	1.06813	-0.72361	False
539643	1.08870	1.35621	0.04789	False
539781	1.01723	1.36032	0.46527	False
539791	-0.81279	-1.10591	0.99907	False
539793	-1.26476	-1.24904	-0.72378	False
540727	1.33029	1.51646	-0.41914	False
558385	0.75315	0.87704	-0.69418	False

Table 2.6.11

b/b Analysis

Mathematics Grade 7

Item Id	Old b	New b	Std Dist	Flag
124350A	0.64441	0.51511	0.08973	False
124359A	0.19523	0.42030	0.23920	False
124361A	0.52771	0.59418	-0.57930	False
124504A	1.10141	0.97062	0.03287	False
124508A	-0.86613	-0.68899	-0.17339	False
124648A	0.49129	0.66840	0.01950	False
124652A	1.62752	1.59871	-0.59865	False
400327	2.92662	2.13359	3.38839	True
400877	-0.08509	0.01648	-0.47484	False
400884	1.72354	1.82166	-0.23645	False
408770	-0.11701	-0.02196	-0.51497	False
408783	1.45989	1.58290	-0.13808	False
410251	0.34792	0.38390	-0.77035	False
412048	0.22092	0.29133	-0.60142	False
412197	0.38537	0.51454	-0.25727	False
412200	0.40959	0.16630	0.74539	False
412224	0.42366	0.57514	-0.13003	False
412251	-0.33783	-0.28934	-0.74111	False
412263	-1.23312	-1.17152	-0.68535	False
412395	0.91051	1.00507	-0.37151	False
467173	1.91292	1.92156	-0.69798	False
467221	0.60588	0.57657	-0.45062	False
467737	0.74127	0.85454	-0.29345	False
467772	1.92478	1.90500	-0.69022	False
467828	-0.15443	-0.01179	-0.26050	False
467844	2.09468	1.33742	3.31145	True
467858	1.82429	1.96077	-0.01272	False
467883	1.66566	1.63884	-0.61494	False
532217	2.29025	2.29649	-0.65742	False
539407	0.57339	0.67873	-0.36061	False
539434	0.60708	0.51311	-0.09782	False
539440	0.85309	0.99171	-0.13916	False
539442	4.08200	4.50831	1.89052	False
557940	0.53713	0.55721	-0.71046	False
557950	1.52550	1.93541	1.43741	False
557952	1.20773	1.06111	0.10417	False

Table 2.6.12
b/b Analysis
Mathematics Grade 8

Item Id	Old b	New b	Std Dist	Flag
126278A	0.47551	0.59990	-0.60373	False
126281A	0.87839	0.81046	-0.75012	False
126883A	0.35747	0.38753	-0.70813	False
127152A	0.58407	0.41893	-0.46198	False
127742A	1.35691	1.32052	-0.43465	False
127837A	-0.58607	-0.47718	-0.35155	False
400370	1.46215	1.32211	-0.57343	False
400985	2.13327	2.06466	-0.07981	False
408524	0.68729	0.68516	-0.72853	False
408651	2.12172	2.04411	-0.10293	False
409018	7.93560	3.14474	4.31050	True
409020	1.03784	1.00987	-0.58957	False
412467	0.37910	0.45992	-0.73734	False
412575	1.04741	1.17884	-0.28441	False
412833	1.51788	1.41009	-0.48290	False
413063	-0.88789	-1.82892	1.78622	False
413137	1.66099	2.05771	0.54331	False
413229	-1.14005	-1.21541	0.29174	False
414834	1.69220	1.52021	-0.51045	False
414849	2.45835	3.33568	1.87468	False
414896	0.84331	1.32634	0.26817	False
468276	-0.85922	-1.09746	0.44803	False
468379	0.42829	0.44051	-0.71245	False
468386	1.22779	1.21981	-0.45028	False
468707	1.53370	1.66846	-0.01789	False
468754	0.20744	0.03779	-0.25193	False
483010	0.15751	0.25676	-0.73135	False
483259	0.67148	0.60192	-0.68867	False
532395	1.18915	1.34611	-0.16050	False
540824	1.09227	1.76707	0.76237	False
540838	1.69396	1.00358	-0.06733	False
540848	2.29699	2.03457	-0.35699	False
540850	1.43165	1.26921	-0.63192	False
540876	1.31808	1.51336	-0.01937	False
540892	-1.11123	-0.63552	-0.76095	False
540915	0.79948	-0.41144	1.39118	False
540951	2.28031	2.51669	0.57296	False

Section 2.7

Final Item Parameters

Table 2.7.1

IRT Parameters for Dichotomous Items

English Language Arts Grade 3

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
130328A	0.59312	0.01901	-0.76012	0.13963	0.06028	0.02393
130312A	1.33224	0.04231	-0.59275	0.10903	0.18872	0.01863
422166	0.69306	0.02926	0.60085	0.11683	0.08341	0.01493
130325A	1.07262	0.04729	0.97163	0.10299	0.20911	0.00894
130319A	0.85446	0.03149	-0.32521	0.12838	0.15360	0.02294
559835	0.43911	0.03367	0.80150	0.19147	0.15278	0.03211
559830	1.35290	0.03861	-0.65596	0.10443	0.11069	0.01677
559838	0.59070	0.03346	1.33748	0.12016	0.07975	0.01364
559841	0.98884	0.03403	-0.59028	0.12472	0.16755	0.02415
559845	0.40829	0.02348	0.45531	0.18268	0.08355	0.02920
559847	1.04059	0.03962	0.29988	0.10874	0.21916	0.01313
559849	0.80562	0.04653	1.03394	0.11828	0.27245	0.01295
569376	0.42874	0.01633	-0.65676	0.16505	0.06129	0.02582
552233	1.41813	0.04585	-0.32446	0.10433	0.22621	0.01481
552235	0.84310	0.02657	-0.71083	0.12713	0.08758	0.02460
552255	1.63805	0.04879	-0.19938	0.09699	0.18059	0.01134
552247	1.83997	0.05492	-0.05274	0.09389	0.18753	0.00952
552251	0.88685	0.02615	-0.80997	0.12209	0.07513	0.02310
568986	0.98347	0.02986	-0.44496	0.11363	0.09311	0.01849
543253	0.62421	0.02492	-0.65641	0.16351	0.11312	0.03420
543247	1.22369	0.04537	-0.05029	0.10990	0.29543	0.01464
543241	0.69329	0.02191	-0.67952	0.13286	0.06734	0.02390
543259	0.81315	0.04013	0.50507	0.12411	0.26519	0.01635
543243	0.92838	0.04611	1.25230	0.10675	0.17396	0.00891
474704	0.70490	0.03876	0.81318	0.12566	0.21022	0.01644
474706	0.96564	0.04059	0.75777	0.10591	0.18637	0.01079
474708	0.57987	0.04872	1.98790	0.14230	0.15406	0.01328
474429	1.27348	0.05840	1.12923	0.10039	0.23468	0.00736
474695	1.13754	0.04987	0.72551	0.10497	0.28378	0.01010
543557	0.52661	0.04174	1.52598	0.13913	0.16422	0.01867
543571	0.90254	0.02751	-1.41253	0.13429	0.09022	0.03301
543575	0.94052	0.02638	-0.63158	0.11345	0.06316	0.01846
543565	0.77279	0.02085	-0.96688	0.11956	0.04826	0.01924
543577	1.01434	0.02559	-0.91508	0.10812	0.04486	0.01628
543542	0.86794	0.04217	1.28987	0.10708	0.13283	0.00887
543530	0.58160	0.03813	0.35602	0.17506	0.27651	0.02838
543532	0.74847	0.02607	-0.68431	0.14027	0.10200	0.02864
543534	1.32986	0.03900	-0.15516	0.10019	0.13686	0.01220
543546	1.48025	0.04709	-0.39629	0.10345	0.21836	0.01498

Table 2.7.2

IRT Parameters for Polytomous Items

English Language Arts Grade 3

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
130326A	0.87121	0.01261	-0.12722	0.09037	0.35592	0.01477	-0.35592	0.01426	0.00000	0.00000	n/a	n/a	n/a	n/a
410572	1.00824	0.01070	1.23184	0.08873	1.98980	0.01412	-0.32269	0.01692	-1.66711	0.03530	0.00000	0.00000	n/a	n/a
410580	0.81411	0.01038	2.31270	0.09291	1.85371	0.01530	-0.05349	0.02604	-1.80022	0.07113	0.00000	0.00000	n/a	n/a
543249	0.37910	0.00858	0.76837	0.10841	0.28735	0.02933	-0.28735	0.03028	0.00000	0.00000	n/a	n/a	n/a	n/a
543524	0.38336	0.00733	1.79032	0.11466	0.63006	0.03023	-0.63006	0.03579	0.00000	0.00000	n/a	n/a	n/a	n/a
543555	0.79402	0.01231	-0.36148	0.09211	0.31435	0.01627	-0.31435	0.01535	0.00000	0.00000	n/a	n/a	n/a	n/a
552223	0.99411	0.01523	-0.10920	0.08948	0.21364	0.01320	-0.21364	0.01291	0.00000	0.00000	n/a	n/a	n/a	n/a
552261	0.81679	0.01032	1.35442	0.09187	1.39846	0.01514	-1.39846	0.03170	0.00000	0.00000	n/a	n/a	n/a	n/a
559821	0.53190	0.00789	0.13939	0.09681	0.62357	0.02185	-0.62357	0.02206	0.00000	0.00000	n/a	n/a	n/a	n/a
559851	0.63415	0.00781	1.40253	0.09512	1.51913	0.01857	-1.51913	0.03450	0.00000	0.00000	n/a	n/a	n/a	n/a

Table 2.7.3

IRT Parameters for Dichotomous Items

English Language Arts Grade 4

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
552908	1.24173	0.04316	-0.54278	0.18239	0.26121	0.02199
552906	0.63520	0.03222	0.37950	0.20778	0.15279	0.02364
552910	0.50082	0.01617	-1.89909	0.20202	0.00000	0.00000
552912	1.12592	0.03874	-0.72579	0.18982	0.21192	0.02689
552916	0.32099	0.01194	0.23862	0.17572	0.00000	0.00000
552918	0.80065	0.03375	0.45905	0.18252	0.15107	0.01632
552931	1.23378	0.03986	0.09629	0.16796	0.18836	0.01290
552938	0.53596	0.04255	1.33474	0.20920	0.19477	0.02131
552933	0.58004	0.01475	-0.88966	0.17111	0.00000	0.00000
552940	1.47121	0.04285	-0.52494	0.16806	0.15187	0.01654
552944	1.25710	0.04102	0.04653	0.16871	0.20582	0.01337
552946	1.32044	0.04204	-0.04411	0.16806	0.20669	0.01360
552948	0.95154	0.02834	-0.14121	0.17407	0.07554	0.01555
552950	0.88104	0.04386	1.39049	0.17157	0.12701	0.00869
476097	1.01026	0.02650	-0.06065	0.16587	0.04387	0.01119
476121	1.43231	0.04108	-0.30530	0.16573	0.14771	0.01406
486800	1.01211	0.03590	0.21364	0.17398	0.17196	0.01446
476151	1.36003	0.08130	1.38025	0.16960	0.35425	0.00724
476177	1.05929	0.02487	-0.70945	0.16726	0.03370	0.01251
420698	0.50969	0.02859	0.86910	0.20594	0.08092	0.02135
420714	0.64893	0.03227	0.19166	0.21384	0.17076	0.02594
422664	0.74777	0.03083	-0.38182	0.21385	0.17031	0.03028
420785	0.58587	0.01642	-1.52394	0.18436	0.00000	0.00000
420820	0.36600	0.01223	0.14417	0.17176	0.00000	0.00000
544006	0.71230	0.03722	0.52092	0.19868	0.22172	0.02010
544034	0.51862	0.03691	1.02924	0.21749	0.15942	0.02430
544036	0.81403	0.03160	-0.33189	0.20220	0.16911	0.02661
544014	0.51526	0.01357	-0.48395	0.16807	0.00000	0.00000
544002	1.03560	0.03945	0.46890	0.17135	0.20022	0.01253
544476	1.62772	0.04585	-1.21899	0.16760	0.05935	0.01868
544455	0.73658	0.02668	-0.14271	0.19394	0.09195	0.02214
544457	0.50547	0.01357	-0.58942	0.16993	0.00000	0.00000
544460	0.38886	0.01274	-0.84036	0.18250	0.00000	0.00000
544483	0.88523	0.03742	0.91094	0.17004	0.13129	0.01083
543932	0.79214	0.03801	1.06955	0.17420	0.13317	0.01177
543944	1.46919	0.04132	-1.07629	0.17107	0.07832	0.02086
543946	0.47994	0.04554	2.06879	0.21671	0.12768	0.01823
543940	1.65844	0.07510	1.47186	0.16123	0.14377	0.00474
543950	0.41257	0.01263	0.41924	0.16956	0.00000	0.00000

Table 2.7.4

IRT Parameters for Polytomous Items

English Language Arts Grade 4

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
420723	0.47136	0.00724	0.10663	0.16355	0.62375	0.02385	-0.62375	0.02364	0.00000	0.00000	n/a	n/a	n/a	n/a
476102	0.29533	0.00672	1.82700	0.18986	0.50017	0.03733	-0.50017	0.04073	0.00000	0.00000	n/a	n/a	n/a	n/a
476172	1.24124	0.01480	0.70259	0.15159	0.80974	0.01086	-0.80974	0.01425	0.00000	0.00000	n/a	n/a	n/a	n/a
543942	0.55812	0.01054	0.60604	0.16238	0.24593	0.02008	-0.24593	0.02071	0.00000	0.00000	n/a	n/a	n/a	n/a
544453	0.56490	0.01017	-0.34227	0.16222	0.29228	0.02077	-0.29228	0.01987	0.00000	0.00000	n/a	n/a	n/a	n/a
552900	0.92935	0.01629	-0.73828	0.15827	0.14881	0.01525	-0.14881	0.01424	0.00000	0.00000	n/a	n/a	n/a	n/a
552922	0.83343	0.00945	0.46987	0.15493	1.01399	0.01524	-1.01399	0.01744	0.00000	0.00000	n/a	n/a	n/a	n/a
552924	0.76043	0.00000	1.98531	0.15659	2.10261	0.01559	-0.19243	0.02335	-1.91018	0.05677	0.00000	0.00000	n/a	n/a
552927	1.02753	0.01543	0.02368	0.15363	0.20947	0.01242	-0.20947	0.01215	0.00000	0.00000	n/a	n/a	n/a	n/a
552956	0.99780	0.01182	1.81952	0.15430	1.45217	0.01250	-0.04764	0.01840	-1.40454	0.04278	0.00000	0.00000	n/a	n/a

Table 2.7.5

IRT Parameters for Dichotomous Items

English Language Arts Grade 5

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
552544	1.28093	0.03849	-1.46005	0.05246	0.09360	0.02937
552554	0.85510	0.02994	-0.93894	0.07652	0.14097	0.03288
552561	0.61399	0.03686	1.26726	0.05467	0.10345	0.01410
552556	0.65619	0.04239	0.78190	0.07158	0.26079	0.01906
552552	0.99057	0.03149	-1.08700	0.06448	0.12229	0.03061
552563	0.63384	0.05350	1.25930	0.07369	0.32899	0.01701
131427A	0.73774	0.04177	1.01269	0.05155	0.19063	0.01363
131430A	1.05041	0.04136	0.69093	0.03634	0.16880	0.00966
131429A	0.56359	0.06817	2.24095	0.11767	0.26271	0.01450
131431A	0.73214	0.02233	-0.39702	0.05469	0.05484	0.01826
131440A	0.61227	0.04161	1.06282	0.06665	0.20057	0.01801
131445A	0.73967	0.02357	-0.28258	0.05472	0.06020	0.01825
131444A	0.73768	0.02152	-0.70661	0.05804	0.05639	0.02047
131437A	0.86013	0.05005	1.06013	0.04842	0.26935	0.01160
560306	0.65033	0.02416	-0.76118	0.08932	0.10135	0.03223
560314	0.97409	0.04434	0.47152	0.04759	0.28772	0.01326
560301	1.03679	0.03345	-0.70012	0.05518	0.14813	0.02344
560316	1.24491	0.03744	-0.98172	0.04891	0.12806	0.02387
560318	0.63450	0.01924	-0.51580	0.05979	0.04798	0.01861
536048	0.42230	0.05630	1.80194	0.12396	0.29905	0.02764
536040	1.04070	0.03430	-0.50312	0.05206	0.16560	0.02063
536026	0.79119	0.02885	-0.56253	0.07152	0.12956	0.02710
536046	1.39841	0.04413	-0.37821	0.03904	0.22362	0.01503
536024	0.88329	0.03884	0.37719	0.05088	0.22877	0.01507
459808	0.38402	0.02491	-0.14924	0.18551	0.12964	0.04462
459819	0.98129	0.03679	-0.79518	0.07128	0.23800	0.02953
459823	0.41157	0.01266	-0.79145	0.04634	0.00000	0.00000
459830	0.51435	0.04764	1.71228	0.07976	0.18035	0.01863
459811	0.81653	0.03154	-0.17910	0.06216	0.15638	0.02150
536061	1.06724	0.03371	-1.14213	0.06166	0.12805	0.03064
536076	1.34022	0.04409	-0.71340	0.04705	0.23387	0.02062
536078	1.24811	0.04734	0.78580	0.03199	0.17260	0.00775
536068	1.32043	0.06836	1.18731	0.03635	0.27364	0.00709
536072	0.56835	0.01938	-0.53741	0.07487	0.05984	0.02311
545263	0.53732	0.01938	-0.82096	0.09326	0.07503	0.02945
545279	1.00320	0.03455	-0.64873	0.05970	0.18338	0.02451
545265	1.40358	0.04370	0.74459	0.02713	0.08862	0.00570
545281	0.79262	0.04281	0.70467	0.05553	0.26017	0.01504
545283	0.66115	0.03825	0.86306	0.06023	0.17596	0.01692

Table 2.7.6

IRT Parameters for Polytomous Items

English Language Arts Grade 5

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
131452A	1.11828	0.01912	-0.66486	0.02512	0.08702	0.01262	-0.08702	0.01217	0.00000	0.00000	n/a	n/a	n/a	n/a
131484A	0.88311	0.01218	1.48578	0.02718	0.91488	0.01415	-0.91488	0.02674	0.00000	0.00000	n/a	n/a	n/a	n/a
536034	0.69211	0.01182	-0.16493	0.02808	0.21972	0.01689	-0.21972	0.01660	0.00000	0.00000	n/a	n/a	n/a	n/a
536070	0.30291	0.00519	3.07851	0.06094	1.43066	0.03769	-1.43066	0.05797	0.00000	0.00000	n/a	n/a	n/a	n/a
545273	0.40459	0.00721	0.96963	0.04040	0.55452	0.02682	-0.55452	0.02947	0.00000	0.00000	n/a	n/a	n/a	n/a
552537	0.52853	0.01039	0.01197	0.03230	0.20923	0.02103	-0.20923	0.02100	0.00000	0.00000	n/a	n/a	n/a	n/a
552565	0.72884	0.00791	0.59018	0.02707	1.45344	0.01730	-1.45344	0.02372	0.00000	0.00000	n/a	n/a	n/a	n/a
552567	0.89615	0.00948	1.52470	0.02430	1.96133	0.01393	-0.12447	0.01858	-1.83686	0.04864	0.00000	0.00000	n/a	n/a
560295	0.68896	0.01137	0.27347	0.02803	0.26949	0.01666	-0.26949	0.01706	0.00000	0.00000	n/a	n/a	n/a	n/a
560333	0.99944	0.01146	1.63406	0.02380	1.54834	0.01244	-0.01709	0.01767	-1.53125	0.04497	0.00000	0.00000	n/a	n/a

Table 2.7.7

IRT Parameters for Dichotomous Items

English Language Arts Grade 6

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
559984	0.60433	0.02239	-0.61262	0.29021	0.09424	0.03128
559980	1.29100	0.04071	-0.40789	0.24227	0.21408	0.01797
559988	0.97691	0.03197	-0.63828	0.25879	0.15321	0.02544
559994	0.87455	0.03215	-0.33586	0.26410	0.19170	0.02437
559992	0.33784	0.01623	-1.83878	0.40912	0.11641	0.04947
560000	0.80524	0.03337	-0.18142	0.27242	0.23276	0.02510
553110	0.61722	0.03764	1.08422	0.26408	0.18748	0.01813
553114	0.67610	0.01512	-0.57482	0.23202	0.00000	0.00000
553112	0.45827	0.04126	1.39147	0.30337	0.21136	0.02672
553116	1.22937	0.03693	-0.45519	0.24210	0.16151	0.01816
553122	0.81036	0.03212	0.60762	0.24490	0.13069	0.01404
553120	0.33573	0.01173	-0.07131	0.24323	0.00000	0.00000
553128	0.45520	0.02903	0.67331	0.31059	0.12076	0.02983
553130	0.52134	0.02495	0.38755	0.28309	0.08609	0.02429
130154A	0.48278	0.04490	1.83670	0.28274	0.18662	0.02063
471626	0.80628	0.06262	1.86823	0.26033	0.27279	0.01001
130171A	1.00660	0.03460	-0.70719	0.26293	0.19607	0.02764
130167A	1.61584	0.06066	0.80976	0.22818	0.26996	0.00771
130168A	1.39465	0.04891	0.85415	0.22814	0.18369	0.00758
536933	0.91714	0.03080	-0.78494	0.26721	0.14855	0.02962
536935	0.50851	0.01546	-1.75927	0.26468	0.00000	0.00000
536939	0.54581	0.02090	-0.87320	0.30947	0.10001	0.03673
536941	0.99858	0.03700	-0.17893	0.25521	0.25789	0.02017
536953	1.25800	0.03713	-0.67698	0.24359	0.13944	0.02028
536840	0.59272	0.02025	-0.94514	0.29066	0.08401	0.03194
536858	1.00653	0.03913	1.26733	0.23224	0.08835	0.00692
536842	0.98762	0.03818	0.32412	0.24575	0.24261	0.01486
536856	0.90406	0.05717	1.62370	0.24726	0.24894	0.00924
536846	0.59201	0.02580	-0.38148	0.30264	0.13022	0.03408
546211	0.62524	0.03083	-0.07459	0.29919	0.19736	0.03110
546209	0.90620	0.02802	0.07935	0.24180	0.08509	0.01450
546223	0.74201	0.02156	-1.99819	0.25904	0.00000	0.00000
546225	0.59023	0.02293	-0.24203	0.28227	0.08665	0.02684
546213	0.89364	0.03375	-0.11997	0.25896	0.21487	0.02116
409362	0.98943	0.04338	0.24435	0.25438	0.35588	0.01640
409385	1.07882	0.04207	0.95741	0.23313	0.16793	0.00895
409396	0.88351	0.03361	0.27450	0.24904	0.18263	0.01635
409447	0.98272	0.04618	1.35879	0.23669	0.16122	0.00826
409472	0.86851	0.03605	0.30402	0.25381	0.23457	0.01728

Table 2.7.8

IRT Parameters for Polytomous Items

English Language Arts Grade 6

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
130173A	0.86582	0.01473	-0.12839	0.22420	0.12563	0.01423	-0.12563	0.01390	0.00000	0.00000	n/a	n/a	n/a	n/a
130184A	0.72272	0.01009	1.99261	0.22804	1.18515	0.01646	-1.18515	0.03567	0.00000	0.00000	n/a	n/a	n/a	n/a
409458	0.56759	0.00872	0.36210	0.22826	0.46931	0.01966	-0.46931	0.01999	0.00000	0.00000	n/a	n/a	n/a	n/a
536931	0.71939	0.01106	-0.27321	0.22591	0.34620	0.01717	-0.34620	0.01598	0.00000	0.00000	n/a	n/a	n/a	n/a
546215	0.34781	0.00742	0.41148	0.23963	0.36260	0.03050	-0.36260	0.03080	0.00000	0.00000	n/a	n/a	n/a	n/a
553108	0.58795	0.01216	0.11939	0.22899	0.09877	0.01907	-0.09877	0.01900	0.00000	0.00000	n/a	n/a	n/a	n/a
553134	0.94550	0.00898	1.75294	0.22130	2.48558	0.01465	0.51364	0.01450	-0.90960	0.02729	-2.08962	0.06103	0.00000	0.00000
559986	0.64550	0.01160	-0.26042	0.22824	0.20257	0.01828	-0.20257	0.01764	0.00000	0.00000	n/a	n/a	n/a	n/a
560002	0.81625	0.00860	0.05141	0.22515	1.75920	0.02185	-1.75920	0.01913	0.00000	0.00000	n/a	n/a	n/a	n/a
560004	0.84806	0.00816	1.94190	0.22241	2.47730	0.01506	0.54979	0.01621	-0.92842	0.03069	-2.09867	0.06393	0.00000	0.00000

Table 2.7.9

IRT Parameters for Dichotomous Items

English Language Arts Grade 7

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
552827	0.51872	0.03308	-0.20925	0.37286	0.29704	0.04026
552823	0.87823	0.03722	1.23277	0.24766	0.12406	0.00878
552825	0.49436	0.04199	1.78711	0.28794	0.18619	0.01863
552831	0.35000	0.02104	0.27383	0.36683	0.09592	0.03494
552839	0.53157	0.02845	0.05223	0.32402	0.17271	0.03162
552841	0.87201	0.03357	0.14894	0.26468	0.22349	0.01697
478263	1.08870	0.03649	-1.78083	0.28430	0.12721	0.04141
478253	0.77378	0.02324	-0.41962	0.26586	0.06916	0.01894
478265	0.74998	0.02988	0.47283	0.26219	0.13868	0.01548
478267	0.99306	0.02862	-0.79951	0.26281	0.09508	0.02138
478261	0.98365	0.03404	-0.13283	0.26142	0.21579	0.01742
478269	0.57482	0.03288	0.76111	0.28813	0.18679	0.02116
478277	0.77427	0.01942	-0.41892	0.25325	0.03334	0.01231
478271	0.62469	0.02385	-0.11800	0.28425	0.09283	0.02311
477635	0.60803	0.03488	0.61090	0.29277	0.24581	0.02183
477633	0.49785	0.02320	-0.00843	0.31320	0.09963	0.02886
477655	0.81277	0.03706	0.41133	0.27010	0.28668	0.01679
477651	0.60473	0.02649	-0.30064	0.30845	0.14960	0.03068
477647	0.63340	0.02170	-0.37670	0.28221	0.07564	0.02309
546948	0.34884	0.01214	-1.65027	0.28776	0.00000	0.00000
546940	0.94961	0.03429	0.92199	0.24478	0.11402	0.00887
546952	1.48772	0.04505	0.57297	0.23806	0.16559	0.00778
546957	0.98319	0.02863	-0.74041	0.26286	0.09919	0.02109
546959	0.51585	0.01616	-1.30545	0.29734	0.06008	0.02545
537778	0.76807	0.02868	0.01025	0.27057	0.14790	0.01946
537781	0.97516	0.03416	-0.16514	0.26312	0.22299	0.01804
537742	0.51269	0.01636	-0.26346	0.27579	0.04257	0.01715
537794	1.34924	0.04980	0.64865	0.24374	0.28226	0.00933
537760	0.90953	0.02829	0.04822	0.25393	0.10365	0.01416
546829	0.71587	0.02002	-0.42577	0.26242	0.04668	0.01622
546849	1.26924	0.06161	1.40949	0.24502	0.24626	0.00705
546837	0.51651	0.01635	-0.19539	0.27305	0.04036	0.01624
546854	0.97392	0.04172	0.93482	0.24993	0.22822	0.01043
546839	1.18633	0.03682	0.07586	0.24779	0.18641	0.01243
409401	0.58878	0.03162	0.62699	0.28746	0.17777	0.02140
409409	0.77468	0.02878	0.78242	0.25084	0.08396	0.01113
409464	1.03489	0.04621	1.15926	0.24736	0.22155	0.00893
409493	0.84055	0.03882	0.81827	0.25844	0.24417	0.01306
409501	0.93554	0.03514	0.56275	0.25217	0.18865	0.01224

Table 2.7.10

IRT Parameters for Polytomous Items

English Language Arts Grade 7

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
409517	0.52459	0.00941	0.93233	0.24344	0.33885	0.02142	-0.33885	0.02267	0.00000	0.00000	n/a	n/a	n/a	n/a
477645	0.66181	0.01048	0.01196	0.23793	0.32808	0.01802	-0.32808	0.01743	0.00000	0.00000	n/a	n/a	n/a	n/a
477778	1.01889	0.01144	0.36345	0.23334	1.40459	0.01588	-1.40459	0.01671	0.00000	0.00000	n/a	n/a	n/a	n/a
478255	0.68411	0.01018	-0.87846	0.24010	0.55344	0.02172	-0.55344	0.01754	0.00000	0.00000	n/a	n/a	n/a	n/a
478259	1.04310	0.00966	0.93689	0.23104	1.66390	0.01415	0.41327	0.01206	-0.59107	0.01475	-1.48609	0.02283	0.00000	0.00000
546843	0.41914	0.00754	0.62568	0.24642	0.45361	0.02600	-0.45361	0.02681	0.00000	0.00000	n/a	n/a	n/a	n/a
546945	0.57479	0.00771	-0.34718	0.23968	0.77598	0.02250	-0.77598	0.01963	0.00000	0.00000	n/a	n/a	n/a	n/a
552819	0.22774	0.00401	1.36117	0.26735	1.08295	0.04616	-1.08295	0.05002	0.00000	0.00000	n/a	n/a	n/a	n/a
552843	0.82877	0.00980	1.11945	0.23493	1.05502	0.01471	-1.05502	0.02155	0.00000	0.00000	n/a	n/a	n/a	n/a
552846	1.00653	0.01070	1.88944	0.23254	1.69285	0.01257	0.44367	0.01469	-0.58882	0.02364	-1.54770	0.04537	0.00000	0.00000

Table 2.7.11

IRT Parameters for Dichotomous Items

English Language Arts Grade 8

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
560476	0.99204	0.04154	0.13925	0.28766	0.33532	0.01721
560487	0.58714	0.01951	-0.59605	0.31077	0.06858	0.02583
560494	0.46402	0.03297	0.92282	0.33990	0.15158	0.02868
560483	1.15689	0.04836	1.02221	0.26628	0.23430	0.00881
560504	0.52992	0.04701	1.82412	0.30805	0.21432	0.01804
560500	0.99173	0.03144	-0.38336	0.28386	0.14019	0.02069
420925	0.69060	0.03080	0.44161	0.29522	0.14754	0.01960
420929	0.44256	0.03663	0.96904	0.36281	0.20293	0.03244
420946	0.80453	0.03044	-0.07464	0.29512	0.16181	0.02203
420872	0.56249	0.01372	-0.62416	0.26909	0.00000	0.00000
420952	0.54675	0.01401	-0.95883	0.27505	0.00000	0.00000
420905	0.37469	0.01231	1.11800	0.28095	0.00000	0.00000
420970	0.63244	0.01439	-0.56076	0.26583	0.00000	0.00000
420913	0.82111	0.03520	0.94972	0.27373	0.14089	0.01180
553144	0.64136	0.03005	-0.02008	0.32319	0.17806	0.02884
553154	0.46284	0.02223	0.90519	0.30232	0.05267	0.01822
553152	0.98646	0.03692	-0.15770	0.28906	0.25955	0.02024
553160	0.91253	0.03126	0.09315	0.27999	0.14312	0.01657
553146	1.19158	0.03739	0.03290	0.27046	0.18357	0.01372
538612	0.78908	0.03218	0.26750	0.29021	0.17709	0.01876
538625	0.81555	0.03963	0.80939	0.28324	0.24610	0.01445
538616	0.88143	0.03276	-0.96201	0.31899	0.20334	0.03841
538618	0.85659	0.02639	-1.42284	0.30785	0.09985	0.03637
538635	0.59985	0.02554	0.77256	0.28602	0.06117	0.01552
548440	0.85106	0.06413	1.88364	0.29009	0.28051	0.00933
548458	0.42447	0.02920	-0.05827	0.42685	0.18834	0.04820
548448	0.74092	0.03167	1.14593	0.27242	0.07856	0.01061
548462	1.00998	0.04439	1.03551	0.26974	0.22222	0.00991
548467	0.51508	0.02396	0.10097	0.32911	0.09485	0.02839
402075	0.33370	0.01918	-0.23090	0.42194	0.10559	0.04179
402111	0.55580	0.01602	-1.72053	0.29234	0.00000	0.00000
402077	0.92175	0.04465	1.34470	0.27117	0.17955	0.00916
402118	0.79469	0.02484	-0.37100	0.28963	0.07989	0.02126
402116	0.81859	0.02151	-0.97802	0.28523	0.05162	0.02012
546082	1.19646	0.03333	-0.13890	0.26807	0.10753	0.01330
546059	1.18705	0.03947	0.11134	0.27164	0.22303	0.01369
546084	0.94486	0.02425	-1.17153	0.28082	0.04988	0.01964
546080	0.86398	0.03391	-0.03888	0.29394	0.22303	0.02113
546067	1.50247	0.04446	-0.77295	0.27188	0.14784	0.01960

Table 2.7.12

IRT Parameters for Polytomous Items

English Language Arts Grade 8

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
402079	0.67022	0.00971	0.06441	0.25836	0.45776	0.01773	-0.45776	0.01709	0.00000	0.00000	n/a	n/a	n/a	n/a
420986	0.58768	0.01063	-0.04401	0.26145	0.22984	0.01953	-0.22984	0.01909	0.00000	0.00000	n/a	n/a	n/a	n/a
420990	1.19791	0.01129	1.19164	0.25135	1.73071	0.01221	0.47682	0.01100	-0.65999	0.01586	-1.54755	0.02835	0.00000	0.00000
538623	0.21227	0.00564	1.46400	0.29878	0.45881	0.04957	-0.45881	0.05123	0.00000	0.00000	n/a	n/a	n/a	n/a
546057	0.55650	0.00930	0.62797	0.26194	0.37087	0.01997	-0.37087	0.02073	0.00000	0.00000	n/a	n/a	n/a	n/a
553142	0.95372	0.01312	-0.12910	0.25472	0.37008	0.01394	-0.37008	0.01284	0.00000	0.00000	n/a	n/a	n/a	n/a
553166	0.90598	0.01091	1.01471	0.25508	0.84438	0.01344	-0.84438	0.01818	0.00000	0.00000	n/a	n/a	n/a	n/a
560466	0.40449	0.00872	-0.19014	0.26965	0.25896	0.02723	-0.25896	0.02667	0.00000	0.00000	n/a	n/a	n/a	n/a
560508	0.85190	0.00990	0.76249	0.25528	0.90307	0.01440	-0.90307	0.01751	0.00000	0.00000	n/a	n/a	n/a	n/a
560510	1.14006	0.01094	1.26415	0.25182	1.60914	0.01206	0.37499	0.01166	-0.57255	0.01604	-1.41158	0.02693	0.00000	0.00000

Table 2.7.13

IRT Parameters for Dichotomous Items

Mathematics Grade 3

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
539899	0.78410	0.03852	-1.70505	0.04706	0.35938	0.05891
417021	0.95650	0.03392	-1.25410	-0.03266	0.18485	0.03326
411119	0.80831	0.02637	-0.46046	-0.05282	0.08694	0.01872
125118A	0.69579	0.03057	0.02548	-0.04066	0.15309	0.02033
123978A	0.89696	0.02794	-0.53195	-0.05716	0.09359	0.01789
462666	0.90767	0.03488	-0.82815	-0.03473	0.24034	0.02725
125291A	0.93571	0.05770	0.95542	-0.05645	0.37334	0.01079
124366A	0.96432	0.03852	0.17749	-0.06094	0.23029	0.01368
411588	0.32836	0.02714	0.24720	0.11373	0.14405	0.04599
462672	1.03955	0.03077	-0.47844	-0.06475	0.10207	0.01518
462586	1.05895	0.03758	-0.30389	-0.05923	0.22813	0.01633
532118	0.62226	0.04084	0.83911	-0.03681	0.24276	0.01802
557246	0.91650	0.04010	0.76682	-0.06690	0.16902	0.01014
539890	1.24785	0.06504	1.14369	-0.06932	0.26562	0.00723
464322	0.85284	0.03941	1.20359	-0.06622	0.09590	0.00785
557244	1.31851	0.08429	1.71800	-0.06053	0.17447	0.00515
462345	1.08516	0.03132	-0.64901	-0.06444	0.09931	0.01614
464204	1.15216	0.03672	-0.15448	-0.06876	0.16485	0.01268
413163	1.01977	0.03673	0.04216	-0.06430	0.19364	0.01333
125137A	0.48859	0.02405	0.16981	-0.01889	0.08025	0.02407
414599	1.41323	0.11227	1.62096	-0.05795	0.36461	0.00617
411764	0.84376	0.04160	0.95669	-0.06349	0.17507	0.01046
411009	0.57156	0.02823	-0.71979	0.01927	0.17917	0.03914
400041	1.04163	0.06218	1.17008	-0.06221	0.31465	0.00873
125223A	0.77238	0.03428	0.14604	-0.04774	0.20220	0.01767
125260A	0.78384	0.03965	0.42090	-0.04851	0.26569	0.01591
411642	1.15454	0.04340	0.56364	-0.07288	0.18203	0.00884
125246A	1.22290	0.04843	0.58405	-0.07245	0.22940	0.00884
532135	1.15279	0.04810	0.58382	-0.06991	0.25204	0.00954
401070	0.81445	0.03262	0.08311	-0.05403	0.16569	0.01635
411577	0.44307	0.02821	-0.44253	0.07070	0.17866	0.04547
413036	1.33719	0.05685	0.87708	-0.07428	0.22145	0.00719
411111B	0.48781	0.01302	0.29644	-0.07061	0.00000	0.00000
557268B	1.03887	0.02508	1.37407	-0.07161	0.00000	0.00000
123876A	0.87763	0.01840	0.67758	-0.07794	0.00000	0.00000

Table 2.7.14

IRT Parameters for Polytomous Items

Mathematics Grade 3

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
411111A	0.94140	0.01134	0.29927	-0.08364	0.81508	0.01382	-0.81508	0.01594	0.00000	0.00000	n/a	n/a	n/a	n/a
464499A	1.15949	0.01464	1.66961	-0.08356	1.20656	0.01192	0.41771	0.01464	-0.40463	0.02252	-1.21964	0.04111	0.00000	0.00000
464499B	1.02180	0.01605	1.84767	-0.08077	1.25535	0.01348	-1.25535	0.04616	0.00000	0.00000	n/a	n/a	n/a	n/a
532101A	0.94395	0.01037	0.81004	-0.08384	1.04052	0.01337	0.29028	0.01371	-0.31012	0.01569	-1.02069	0.02084	0.00000	0.00000
532101B	0.97658	0.01296	0.80465	-0.08276	0.65622	0.01314	-0.65622	0.01759	0.00000	0.00000	n/a	n/a	n/a	n/a
557268A	0.85148	0.01064	0.55941	-0.08219	0.79596	0.01457	-0.79596	0.01820	0.00000	0.00000	n/a	n/a	n/a	n/a

Table 2.7.15

IRT Parameters for Dichotomous Items

Mathematics Grade 4

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
540258	0.70472	0.01830	-1.56948	0.05963	0.00000	0.00000
400795	0.55460	0.01448	-1.00876	0.05473	0.00000	0.00000
411727	0.43725	0.01268	0.08911	0.05011	0.00000	0.00000
124951A	0.87934	0.05566	1.28041	0.06276	0.28525	0.01052
400798	0.77357	0.04179	1.28108	0.05928	0.13641	0.01054
124856A	0.89753	0.03937	0.78451	0.05464	0.16573	0.01128
408054	1.20686	0.03685	0.27190	0.04521	0.11540	0.00955
405640	0.79641	0.01720	-0.86002	0.04504	0.00000	0.00000
540326	0.61981	0.01709	-1.64281	0.06512	0.00000	0.00000
414743	0.86980	0.03859	0.93889	0.05336	0.13301	0.01031
124781A	0.69129	0.03379	1.17782	0.05871	0.07386	0.01106
540265	1.00062	0.03899	0.59764	0.05148	0.16501	0.01082
411556	1.08164	0.03967	-0.05060	0.05976	0.24023	0.01586
127388A	0.85444	0.04499	1.34870	0.05700	0.14000	0.00894
532523	0.14504	0.01180	3.72655	0.32983	0.00000	0.00000
127597A	0.62319	0.04397	1.60449	0.07417	0.13921	0.01316
126501A	1.15967	0.03668	-0.10697	0.05245	0.15758	0.01394
560922	0.77249	0.03606	0.32481	0.07384	0.20648	0.01846
411832	0.58296	0.01404	-0.39769	0.04608	0.00000	0.00000
124769A	1.11282	0.03478	-0.41631	0.05825	0.14537	0.01788
126362A	0.44633	0.01280	0.28928	0.05043	0.00000	0.00000
127590A	1.02336	0.04070	1.02526	0.04746	0.10658	0.00751
126341A	0.22916	0.01175	1.49958	0.11075	0.00000	0.00000
407497	0.79124	0.04343	0.60701	0.07374	0.29616	0.01633
408032	0.94651	0.03135	-0.36842	0.06530	0.12855	0.01993
540312	0.84926	0.04660	1.38737	0.05844	0.15211	0.00909
400786	0.23152	0.01220	-2.18977	0.14518	0.00000	0.00000
465876	0.28676	0.02414	3.46525	0.28756	0.20000	0.00000
476868	0.86746	0.05518	1.43959	0.06305	0.23556	0.00969
413818	1.30854	0.06845	1.39574	0.05038	0.21059	0.00621
127466A	1.38525	0.07451	1.62226	0.05230	0.14704	0.00490
400903	0.92131	0.04745	0.73080	0.06206	0.30286	0.01271
126345B	1.02872	0.02040	0.75432	0.03996	0.00000	0.00000
411997B	0.99163	0.01960	0.68151	0.03986	0.00000	0.00000

Table 2.7.16

IRT Parameters for Polytomous Items

Mathematics Grade 4

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
126345A	0.97960	0.01144	-0.03807	0.03584	0.78639	0.01394	-0.78639	0.01348	0.00000	0.00000	n/a	n/a	n/a	n/a
411997A	0.85050	0.01006	0.75468	0.03791	0.98447	0.01422	-0.98447	0.01977	0.00000	0.00000	n/a	n/a	n/a	n/a
447971A	1.09099	0.01086	0.78256	0.03438	1.28173	0.01209	0.31955	0.01173	-0.57744	0.01485	-1.02384	0.01838	0.00000	0.00000
447971B	0.99092	0.01603	1.84861	0.04251	0.76928	0.01455	-0.76928	0.03027	0.00000	0.00000	n/a	n/a	n/a	n/a
448543A	1.33098	0.01365	0.67978	0.03303	0.92924	0.01018	0.29829	0.01006	-0.26609	0.01135	-0.96145	0.01562	0.00000	0.00000
448543B	1.26229	0.01789	0.93389	0.03589	0.39657	0.01088	-0.39657	0.01376	0.00000	0.00000	n/a	n/a	n/a	n/a

Table 2.7.17

IRT Parameters for Dichotomous Items

Mathematics Grade 5

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
464057	0.83874	0.02861	-1.16567	0.04951	0.12760	0.03507
400076	0.30417	0.03084	1.68014	0.12985	0.10634	0.03430
124738A	0.80089	0.04455	1.32143	0.01836	0.16991	0.01013
408459	1.34265	0.12689	2.16161	0.03848	0.23012	0.00495
411149	1.29981	0.04575	0.41710	0.00483	0.22185	0.00944
125951A	0.68602	0.02566	-0.35208	0.04242	0.09986	0.02455
408463	1.36853	0.08717	1.80166	0.01572	0.17193	0.00483
413923	1.04740	0.03091	0.37038	0.00330	0.06776	0.00867
539188	1.30813	0.11207	1.66606	0.02357	0.43712	0.00647
540637	0.72155	0.02705	-1.21573	0.07134	0.14256	0.04167
124737A	1.09077	0.04193	0.18509	0.01481	0.27062	0.01332
125071A	0.79068	0.03609	0.20382	0.03397	0.24287	0.01880
400224	0.41980	0.04835	1.56769	0.09563	0.26426	0.02885
126058A	1.48268	0.10811	2.26251	0.03411	0.10000	0.00000
558705	1.25967	0.06771	1.38703	0.00945	0.23419	0.00643
464086	0.49309	0.02998	0.72295	0.05982	0.11125	0.02436
400711	0.95677	0.02971	-1.03244	0.03125	0.10624	0.02729
411240	1.10001	0.03584	0.50075	0.00420	0.11425	0.00890
558693	1.29237	0.04695	0.17457	0.00877	0.28249	0.01148
532496	0.76211	0.03063	-0.33970	0.04395	0.17329	0.02545
532498	1.21323	0.03908	-0.08299	0.00917	0.19238	0.01318
558689	0.50023	0.03358	-0.39787	0.15425	0.27512	0.04702
124675A	0.98564	0.04191	0.81461	0.01054	0.19190	0.00993
410151	1.25191	0.06788	1.18636	0.01031	0.31810	0.00747
539177	0.66394	0.02063	-0.69500	0.03553	0.06037	0.02199
415312	0.69477	0.03730	0.43286	0.04312	0.25291	0.01998
532490	1.16540	0.04183	0.35123	0.00813	0.21691	0.01081
400639	1.42054	0.09496	1.51242	0.01290	0.34199	0.00617
411295	1.20413	0.03963	-0.59537	0.01817	0.21211	0.01961
539225	1.63991	0.08911	1.52875	0.00571	0.19441	0.00482
532486	1.29394	0.04885	0.85720	0.00291	0.17538	0.00713
415228B	1.26717	0.02617	1.12758	-0.00103	0.00000	0.00000
532475B	1.54226	0.03542	1.37228	-0.00066	0.00000	0.00000
466686	0.82409	0.01895	1.30149	0.00801	0.00000	0.00000
466529	0.45782	0.01271	0.38641	0.00875	0.00000	0.00000

Table 2.7.18

IRT Parameters for Polytomous Items

Mathematics Grade 5

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
415228A	1.00960	0.01191	0.46678	-0.00625	0.84922	0.01255	-0.84922	0.01575	0.00000	0.00000	n/a	n/a	n/a	n/a
415320A	1.63067	0.01884	1.22204	-0.00942	1.09001	0.00890	0.09183	0.01119	-0.29707	0.01344	-0.88477	0.02022	0.00000	0.00000
415320B	1.72016	0.03244	1.63244	-0.00390	0.36812	0.01177	-0.36812	0.01843	0.00000	0.00000	n/a	n/a	n/a	n/a
532475A	1.00489	0.01132	0.34160	-0.00543	1.35068	0.01420	-1.35068	0.01842	0.00000	0.00000	n/a	n/a	n/a	n/a
532484A	0.87183	0.00847	0.42837	-0.00591	1.23269	0.01470	0.41941	0.01354	-0.13049	0.01415	-1.52162	0.02154	0.00000	0.00000
532484B	0.89905	0.01453	0.56109	-0.00310	0.19601	0.01374	-0.19601	0.01454	0.00000	0.00000	n/a	n/a	n/a	n/a

Table 2.7.19

IRT Parameters for Dichotomous Items

Mathematics Grade 6

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
539793	0.67549	0.03004	-1.46587	-0.06853	0.24007	0.04887
414069	1.12104	0.09245	1.80524	-0.14049	0.27809	0.00625
464910	0.88017	0.09103	2.10947	-0.10678	0.28044	0.00736
532622	0.73187	0.02467	-0.62322	-0.14057	0.09129	0.02120
539595	1.10855	0.05920	1.23480	-0.16243	0.22615	0.00702
539597	1.07296	0.04139	0.51186	-0.16711	0.19837	0.00922
539622	1.01929	0.04773	0.89872	-0.16423	0.22317	0.00854
400411	0.37955	0.02232	0.67054	-0.10369	0.06663	0.02335
464562	0.77827	0.03867	0.49600	-0.14957	0.24822	0.01411
415230	1.02214	0.04903	1.34367	-0.16242	0.11890	0.00601
412273	0.58013	0.03095	0.93830	-0.14830	0.09012	0.01415
400238	0.56924	0.06322	1.78107	-0.10621	0.34966	0.01480
464839	0.37479	0.03040	0.92662	-0.07853	0.11789	0.03006
406039	0.84423	0.04289	0.96908	-0.15903	0.19778	0.00997
415140	0.39317	0.01895	0.41040	-0.11701	0.05185	0.01987
474350	0.97035	0.03934	0.40074	-0.16207	0.22047	0.01106
419551	0.94199	0.03520	-0.30804	-0.15028	0.24089	0.01691
125839A	0.57088	0.01983	-0.81871	-0.12304	0.07068	0.02483
539791	0.58598	0.02064	-1.31981	-0.10459	0.09471	0.03375
125837A	1.04742	0.03158	-2.00932	-0.13981	0.08863	0.03208
400688	0.65122	0.01928	0.11759	-0.16234	0.02743	0.00966
412411	0.95103	0.03595	-0.38714	-0.14798	0.26090	0.01780
412181	1.73741	0.20531	1.95003	-0.13991	0.39754	0.00504
540727	1.26673	0.07460	1.35622	-0.16169	0.26300	0.00630
412462	0.56308	0.02969	-0.28960	-0.09569	0.19175	0.03034
415153	0.82091	0.03862	0.11739	-0.14342	0.30182	0.01626
412050	0.93610	0.03263	-0.52303	-0.14906	0.19638	0.01867
539618	1.23135	0.05527	1.01758	-0.16848	0.20155	0.00667
412393	1.24813	0.05989	1.31766	-0.16609	0.14814	0.00540
125464A	0.82559	0.02908	-1.26002	-0.12250	0.16148	0.03290
400114	0.47060	0.02272	0.18785	-0.11878	0.07188	0.02231
539781	1.42951	0.07588	1.19688	-0.16696	0.26797	0.00609
410187	0.98332	0.12952	2.68040	-0.04809	0.16399	0.00498
539643	2.20986	0.09285	1.19269	-0.17665	0.11250	0.00362
124799A	1.14516	0.02745	-0.68946	-0.16977	0.04400	0.01050
532604B	1.05394	0.03713	2.22743	-0.14019	0.00000	0.00000
558418B	1.15484	0.02561	1.14210	-0.17234	0.00000	0.00000
558385	0.91130	0.01871	0.70371	-0.17406	0.00000	0.00000

Table 2.7.20

IRT Parameters for Polytomous Items

Mathematics Grade 6

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
412531A	1.29727	0.01415	0.86804	-0.18247	0.92807	0.01027	0.30992	0.01086	-0.26832	0.01310	-0.96967	0.01933	0.00000	0.00000
412531B	1.50942	0.02489	1.25546	-0.17924	0.39149	0.01105	-0.39149	0.01642	0.00000	0.00000	n/a	n/a	n/a	n/a
532604A	0.59696	0.00000	2.44813	-0.15659	0.87122	0.02360	-0.87122	0.04340	0.00000	0.00000	n/a	n/a	n/a	n/a
539624A	1.16235	0.01123	0.65110	-0.18252	1.44101	0.01190	0.53879	0.01108	-0.73568	0.01558	-1.24413	0.02058	0.00000	0.00000
539624B	0.97344	0.01298	0.42306	-0.17948	0.45449	0.01268	-0.45449	0.01442	0.00000	0.00000	n/a	n/a	n/a	n/a
558418A	1.11843	0.01657	1.26494	-0.17766	0.60639	0.01254	-0.60639	0.02055	0.00000	0.00000	n/a	n/a	n/a	n/a

Table 2.7.21

IRT Parameters for Dichotomous Items

Mathematics Grade 7

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
124508A	0.77237	0.03211	-0.71769	0.03871	0.22132	0.03045
124652A	1.00960	0.07392	1.54652	0.00684	0.32051	0.00795
467772	1.80057	0.15372	1.84966	0.00074	0.27623	0.00480
408783	1.75348	0.12412	1.53087	-0.00722	0.33630	0.00547
408770	0.92026	0.03913	-0.05751	0.00939	0.29104	0.01725
124504A	0.80109	0.04541	0.92488	0.00259	0.25529	0.01236
467844	0.49717	0.04125	1.28791	0.03392	0.18608	0.02103
557952	1.04371	0.05162	1.01444	-0.00841	0.23611	0.00861
412048	1.04292	0.03968	0.25257	-0.00690	0.21810	0.01199
400884	0.70287	0.06073	1.76718	0.02661	0.26153	0.01105
412263	0.81383	0.02406	-1.19526	0.01694	0.07849	0.02621
467173	1.55380	0.10844	1.86605	0.00056	0.16110	0.00430
557940	1.53480	0.05058	0.51572	-0.02003	0.16564	0.00688
539434	0.54253	0.02370	0.47207	0.01316	0.05479	0.01653
124359A	1.13289	0.04945	0.38021	-0.00567	0.33276	0.01121
467858	1.71190	0.12724	1.90486	0.00002	0.16594	0.00410
412395	1.76031	0.06226	0.95898	-0.02156	0.11343	0.00458
467221	0.89681	0.04147	0.53488	-0.00114	0.24641	0.01266
124361A	1.07670	0.03519	0.55231	-0.01643	0.08801	0.00767
412200	0.69414	0.03551	0.12882	0.02754	0.24187	0.02153
539440	0.67889	0.04343	0.94575	0.01311	0.25158	0.01536
539442	0.15421	0.00000	4.42624	0.70988	0.37128	0.05391
124350A	1.59788	0.05844	0.47405	-0.01803	0.25725	0.00775
410251	0.73294	0.03957	0.34419	0.02034	0.28674	0.01838
400877	1.25725	0.04672	-0.01946	-0.00703	0.30803	0.01248
412251	1.24080	0.04402	-0.32214	-0.00329	0.29490	0.01509
400327	0.99506	0.09060	2.07591	0.03249	0.24322	0.00657
467737	0.75500	0.03923	0.80999	0.00218	0.19196	0.01323
412197	1.77441	0.06169	0.47348	-0.02037	0.23001	0.00705
539407	1.03167	0.04341	0.63599	-0.00946	0.21435	0.00999
124648A	1.76239	0.06241	0.62576	-0.02086	0.20454	0.00640
412224	1.05991	0.04702	0.53346	-0.00643	0.28665	0.01085
467828	0.78035	0.03602	-0.04744	0.02107	0.25978	0.02053
412636B	1.42716	0.02687	0.57074	-0.02477	0.00000	0.00000
406243B	1.44001	0.02601	0.33896	-0.02562	0.00000	0.00000
557950	0.74395	0.02175	1.87976	0.00783	0.00000	0.00000
532217	0.47907	0.01695	2.23713	0.03680	0.00000	0.00000
467883	0.61072	0.01721	1.58624	0.00464	0.00000	0.00000

Table 2.7.22

IRT Parameters for Polytomous Items

Mathematics Grade 7

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
406243A	1.38149	0.01841	-0.18515	-0.02708	0.29503	0.01032	-0.29503	0.00991	0.00000	0.00000	n/a	n/a	n/a	n/a
412636A	1.36055	0.02152	0.30668	-0.02601	0.10798	0.01012	-0.10798	0.01033	0.00000	0.00000	n/a	n/a	n/a	n/a
446620A	1.17166	0.01161	0.72937	-0.02693	1.29550	0.01160	0.80680	0.01097	-0.25148	0.01286	-1.85081	0.03192	0.00000	0.00000
446620B	0.88179	0.01450	1.98534	-0.01637	0.93998	0.01589	-0.93998	0.03782	0.00000	0.00000	n/a	n/a	n/a	n/a
532211A	1.26425	0.01244	0.82631	-0.02755	1.36596	0.01101	0.59578	0.01044	-0.23112	0.01259	-1.73061	0.03179	0.00000	0.00000
532211B	1.04220	0.01538	1.33312	-0.02154	0.62210	0.01306	-0.62210	0.02115	0.00000	0.00000	n/a	n/a	n/a	n/a

Table 2.7.23

IRT Parameters for Dichotomous Items

Mathematics Grade 8

	Parameters and Measures of Standard Error					
Item ID	a	SE(a)	b	SE(b)	c	SE(c)
468379	0.98256	0.03109	0.48350	0.09085	0.06987	0.00938
540824	0.71490	0.05866	1.73107	0.12467	0.26643	0.01192
483010	0.50784	0.03839	0.31069	0.20120	0.28332	0.03526
413229	0.74671	0.01719	-1.07382	0.09393	0.00000	0.00000
540848	1.52511	0.10127	1.98265	0.10492	0.12737	0.00398
540850	1.36979	0.06939	1.26286	0.09296	0.26150	0.00680
414834	1.20803	0.06212	1.49891	0.09630	0.16951	0.00614
126281A	1.37634	0.05586	0.83142	0.08962	0.24598	0.00797
468707	1.00259	0.05798	1.63833	0.10409	0.16631	0.00705
468276	0.92171	0.02579	-0.96289	0.11069	0.06657	0.02216
127152A	0.76997	0.02575	0.46321	0.09713	0.04615	0.01119
468754	0.93405	0.03519	0.10476	0.10614	0.18790	0.01631
400370	0.90701	0.05160	1.31261	0.10287	0.22856	0.00975
412575	1.66934	0.07864	1.17787	0.08870	0.26159	0.00611
126278A	1.46770	0.05351	0.63340	0.08779	0.23022	0.00817
412833	0.75076	0.05054	1.39535	0.11281	0.24690	0.01232
400985	0.97291	0.08894	2.01094	0.13042	0.31021	0.00764
126883A	1.07826	0.04283	0.43368	0.09818	0.24697	0.01221
413063	0.71951	0.02668	-1.65080	0.17323	0.14697	0.05214
540876	1.09210	0.06617	1.49247	0.10201	0.26085	0.00766
414896	0.79724	0.04797	1.31659	0.10724	0.21736	0.01137
408524	1.05436	0.04350	0.71358	0.09539	0.21198	0.01046
127742A	1.05453	0.06405	1.31111	0.10240	0.32098	0.00885
483259	0.91548	0.04513	0.63530	0.10735	0.30066	0.01366
540951	0.73942	0.08112	2.43606	0.17353	0.23241	0.00896
540915	0.48826	0.02198	-0.31772	0.16600	0.08953	0.03156
408651	1.18728	0.09761	1.99162	0.11870	0.25852	0.00607
127837A	1.44314	0.04684	-0.37955	0.09666	0.25199	0.01571
409018	1.62628	0.39163	3.02671	0.23985	0.25837	0.00416
409020	0.99292	0.04985	1.01896	0.09916	0.25608	0.01014
532395	1.13576	0.06175	1.33518	0.09771	0.25177	0.00773
540838	0.72988	0.04434	1.01304	0.11496	0.25479	0.01501
414849	0.83680	0.17852	3.20628	0.35403	0.34539	0.00685
413137	1.47901	0.11827	2.00441	0.11084	0.22304	0.00492
540892	1.29097	0.05343	-0.52846	0.11483	0.43311	0.02032
412467	1.03243	0.04433	0.50175	0.10102	0.27656	0.01260
482018B	0.94143	0.02289	1.52227	0.09523	0.00000	0.00000
406526B	0.39524	0.01703	2.90499	0.18187	0.00000	0.00000
468386	1.00041	0.02207	1.21640	0.08901	0.00000	0.00000

Table 2.7.24

IRT Parameters for Polytomous Items

Mathematics Grade 8

	Parameters and Measures of Standard Error													
Item ID	a	SE(a)	b	SE(b)	d0	SE(d0)	d1	SE(d1)	d2	SE(d2)	d3	SE(d3)	d4	SE(d4)
406526A	0.91171	0.01023	0.72434	0.08146	1.27892	0.01399	-1.27892	0.02119	0.00000	0.00000	n/a	n/a	n/a	n/a
410287A	1.12994	0.01166	1.70797	0.07890	2.02856	0.01156	0.33416	0.01445	-0.73457	0.02628	-1.62815	0.05287	0.00000	0.00000
410287B	0.94242	0.01262	1.42049	0.08230	1.84791	0.01344	-1.84791	0.04521	0.00000	0.00000	n/a	n/a	n/a	n/a
447438A	1.65229	0.02296	1.62613	0.07879	0.79234	0.00955	0.16401	0.01245	-0.23819	0.01624	-0.71816	0.02441	0.00000	0.00000
447438B	2.25232	0.05414	1.82846	0.08305	0.25658	0.01201	-0.25658	0.01846	0.00000	0.00000	n/a	n/a	n/a	n/a
482018A	0.95711	0.01077	0.46504	0.08043	0.98991	0.01341	-0.98991	0.01640	0.00000	0.00000	n/a	n/a	n/a	n/a

Section 2.8

Decision Accuracy and Consistency (DAC)

Table 2.8.1

DAC Results

English Language Arts Grade 3

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
12342	0.92	0.56	Overall	0.76	0.67	0.12	0.12
			Cut 1	0.93	0.90	0.03	0.03
			Cut 2	0.90	0.86	0.05	0.05
			Cut 3	0.93	0.90	0.04	0.04
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.84	0.76		
			Perf 2	0.71	0.61		
			Perf 3	0.70	0.60		
			Perf 4	0.84	0.76		

Table 2.8.2

DAC Results

English Language Arts Grade 4

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
12871	0.92	0.57	Overall	0.77	0.68	0.12	0.12
			Cut 1	0.93	0.91	0.03	0.03
			Cut 2	0.91	0.87	0.04	0.05
			Cut 3	0.93	0.90	0.04	0.03
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.83	0.74		
			Perf 2	0.69	0.58		
			Perf 3	0.74	0.65		
			Perf 4	0.86	0.78		

Table 2.8.3

DAC Results

English Language Arts Grade 5

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
12984	0.91	0.55	Overall	0.77	0.68	0.12	0.11
			Cut 1	0.93	0.90	0.04	0.04
			Cut 2	0.90	0.86	0.05	0.05
			Cut 3	0.94	0.91	0.03	0.03
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.84	0.75		
			Perf 2	0.66	0.55		
			Perf 3	0.79	0.72		
			Perf 4	0.81	0.68		

Table 2.8.4

DAC Results

English Language Arts Grade 6

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
13187	0.91	0.56	Overall	0.78	0.69	0.11	0.11
			Cut 1	0.95	0.93	0.02	0.03
			Cut 2	0.90	0.86	0.05	0.05
			Cut 3	0.92	0.89	0.04	0.03
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.81	0.70		
			Perf 2	0.77	0.68		
			Perf 3	0.76	0.68		
			Perf 4	0.82	0.71		

Table 2.8.5

DAC Results

English Language Arts Grade 7

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
12934	0.92	0.57	Overall	0.78	0.69	0.11	0.11
			Cut 1	0.95	0.93	0.02	0.03
			Cut 2	0.91	0.88	0.04	0.04
			Cut 3	0.92	0.88	0.04	0.04
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.86	0.77		
			Perf 2	0.72	0.61		
			Perf 3	0.78	0.71		
			Perf 4	0.80	0.70		

Table 2.8.6

DAC Results

English Language Arts Grade 8

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
13093	0.92	0.58	Overall	0.80	0.71	0.10	0.10
			Cut 1	0.95	0.93	0.02	0.02
			Cut 2	0.91	0.87	0.04	0.05
			Cut 3	0.94	0.91	0.04	0.03
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.82	0.71		
			Perf 2	0.77	0.68		
			Perf 3	0.81	0.75		
			Perf 4	0.80	0.67		

Table 2.8.7

DAC Results

Mathematics Grade 3

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
12396	0.91	0.51	Overall	0.74	0.66	0.16	0.10
			Cut 1	0.93	0.89	0.04	0.03
			Cut 2	0.89	0.85	0.03	0.07
			Cut 3	0.92	0.90	0.08	0.00
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.84	0.77		
			Perf 2	0.76	0.66		
			Perf 3	0.67	0.62		
			Perf 4	1.00	0.28		

Table 2.8.8

DAC Results

Mathematics Grade 4

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
12918	0.90	0.53	Overall	0.76	0.67	0.13	0.12
			Cut 1	0.93	0.89	0.04	0.04
			Cut 2	0.90	0.85	0.04	0.06
			Cut 3	0.94	0.91	0.05	0.02
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.83	0.74		
			Perf 2	0.78	0.70		
			Perf 3	0.69	0.61		
			Perf 4	0.76	0.58		

Table 2.8.9

DAC Results

Mathematics Grade 5

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
13019	0.90	0.51	Overall	0.73	0.66	0.17	0.11
			Cut 1	0.93	0.90	0.04	0.03
			Cut 2	0.89	0.85	0.03	0.07
			Cut 3	0.90	0.90	0.10	0.00
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.83	0.75		
			Perf 2	0.84	0.76		
			Perf 3	0.54	0.49		
			Perf 4	1.00	0.48		

Table 2.8.10

DAC Results

Mathematics Grade 6

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
13212	0.90	0.49	Overall	0.72	0.64	0.16	0.12
			Cut 1	0.92	0.89	0.04	0.04
			Cut 2	0.89	0.84	0.04	0.08
			Cut 3	0.92	0.90	0.08	0.00
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.89	0.83		
			Perf 2	0.75	0.64		
			Perf 3	0.52	0.46		
			Perf 4	1.00	0.31		

Table 2.8.11

DAC Results

Mathematics Grade 7

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
12953	0.92	0.57	Overall	0.72	0.70	0.13	0.15
			Cut 1	0.94	0.91	0.03	0.03
			Cut 2	0.85	0.80	0.03	0.12
			Cut 3	0.93	0.98	0.07	0.00
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.89	0.83		
			Perf 2	0.77	0.64		
			Perf 3	0.56	0.59		
			Perf 4	1.00	0.82		

Table 2.8.12

DAC Results

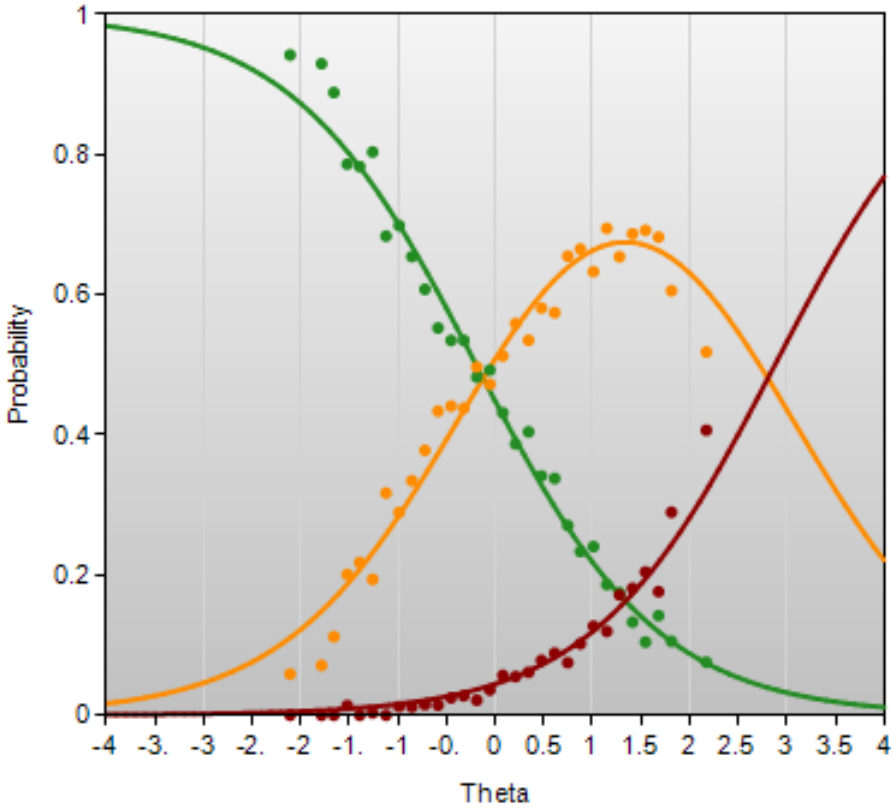
Mathematics Grade 8

N	Reliability	Kappa		Accuracy	Consistency	F Pos	F Neg
13106	0.90	0.45	Overall	0.67	0.60	0.18	0.16
			Cut 1	0.93	0.90	0.04	0.04
			Cut 2	0.85	0.80	0.03	0.12
			Cut 3	0.89	0.88	0.11	0.00
			Cut 4	1.00	1.00	0.00	0.00
			Perf 1	0.87	0.80		
			Perf 2	0.74	0.61		
			Perf 3	0.49	0.46		
			Perf 4	1.00	0.43		

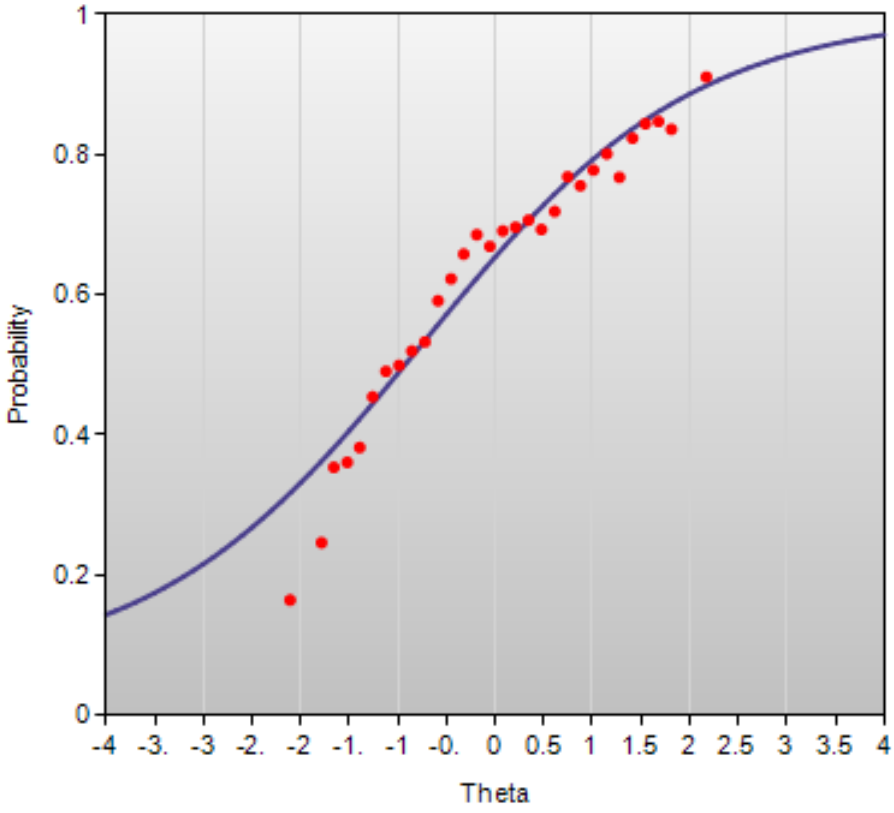
Section 2.9

Fit Plots of Watchlist Items

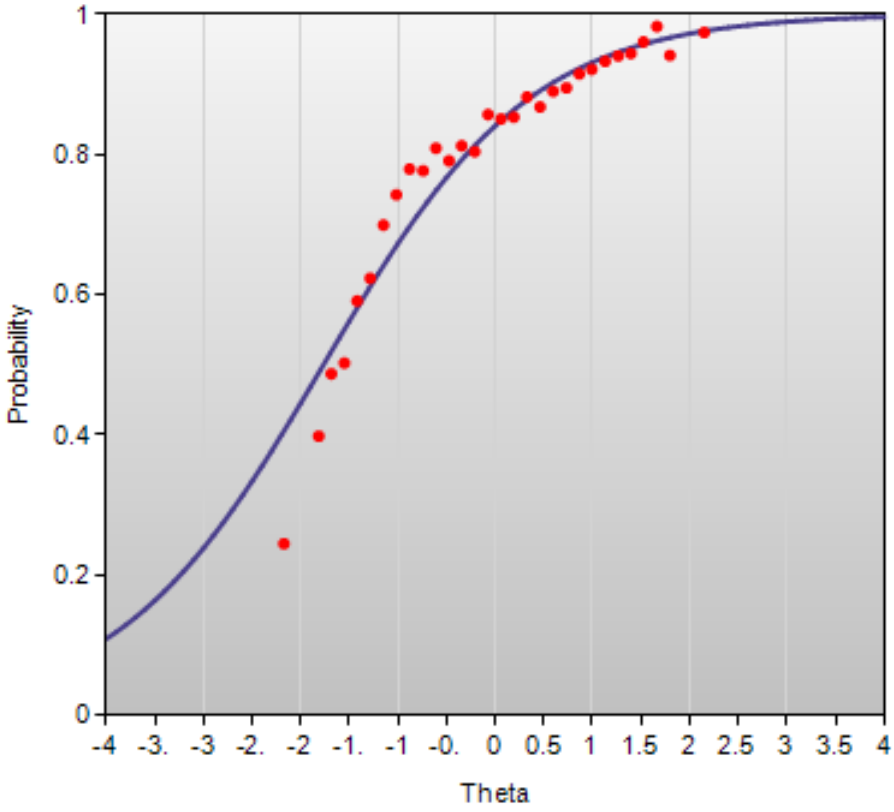
English Language Arts Grade 3: 559851



English Language Arts Grade 3: 569376



English Language Arts Grade 4: 420785



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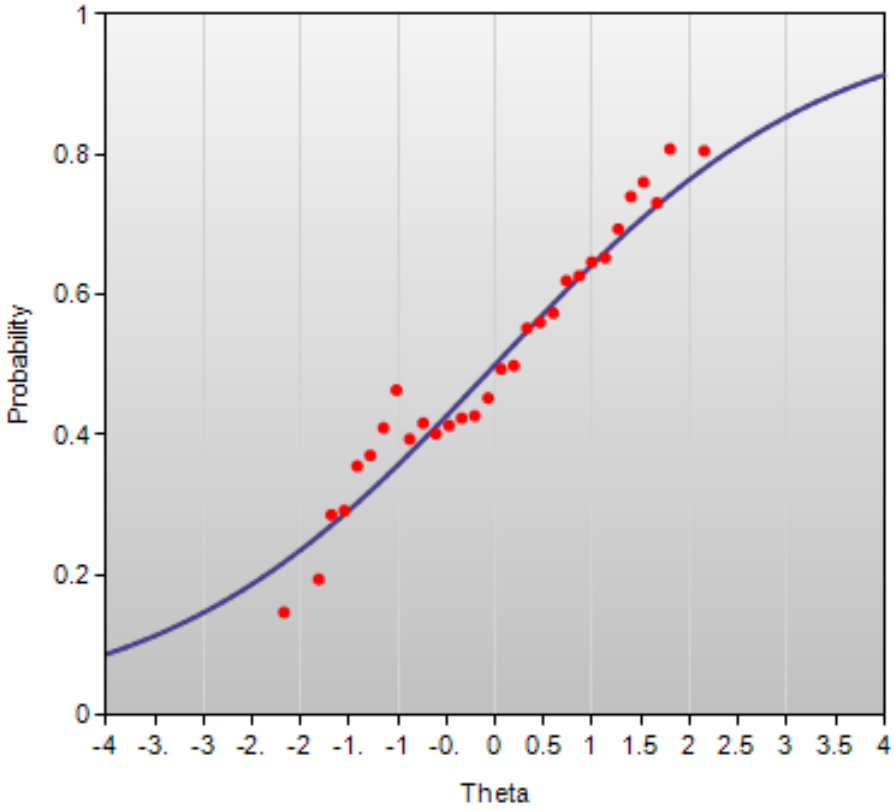

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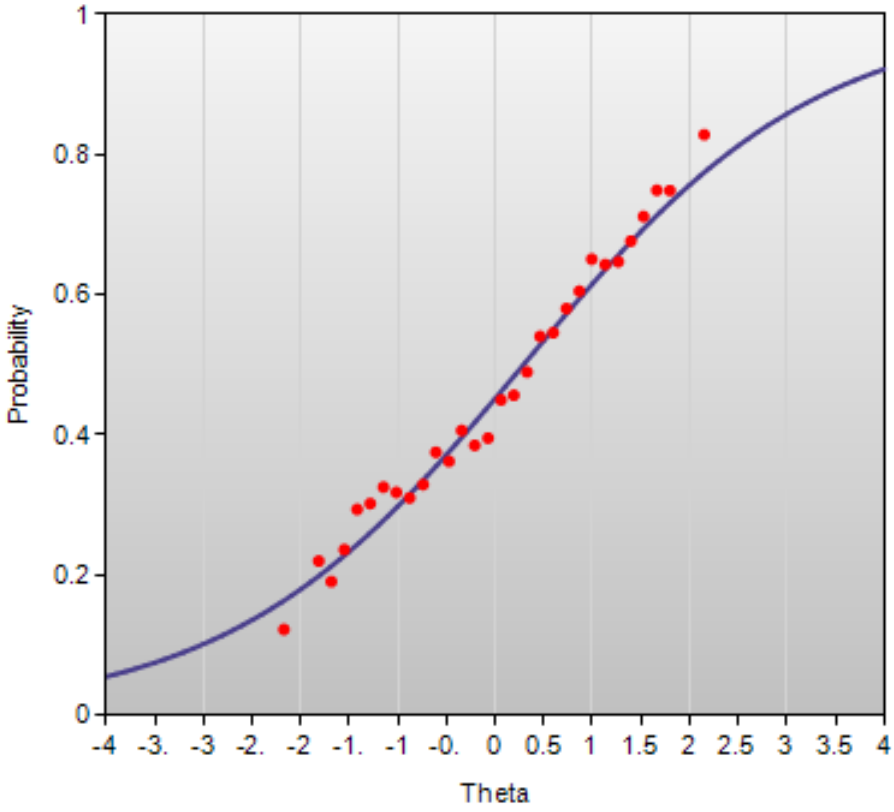

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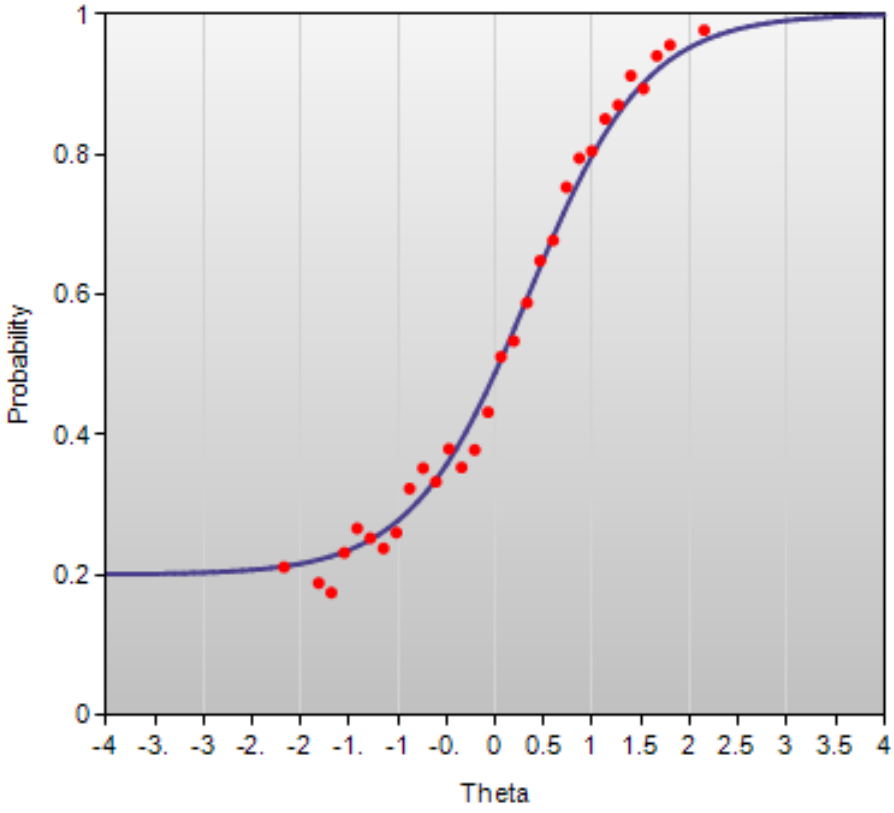

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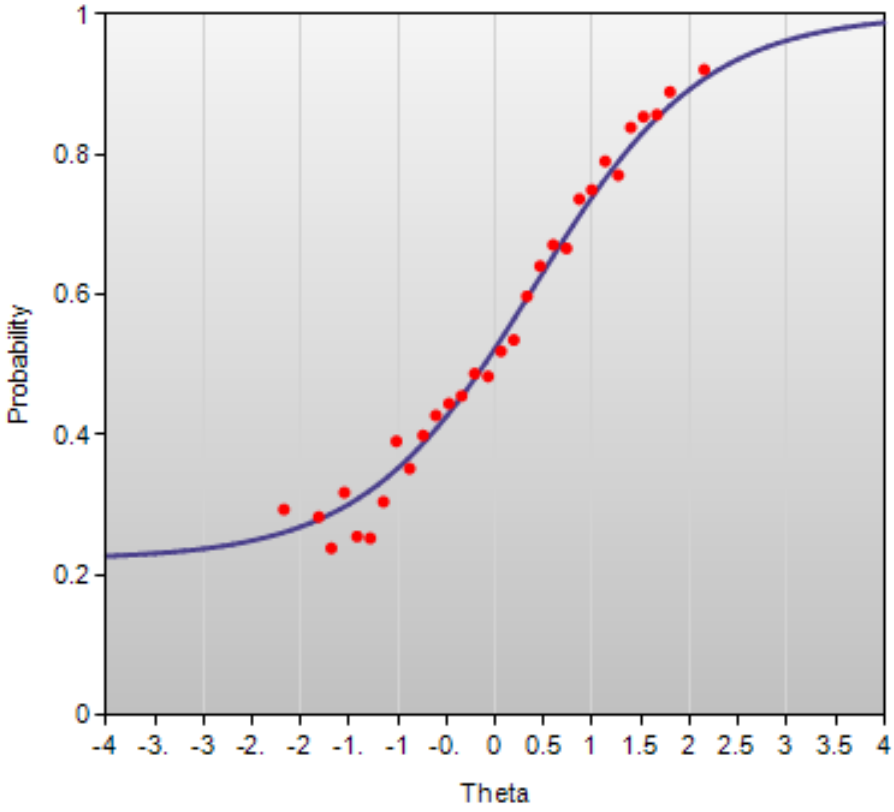

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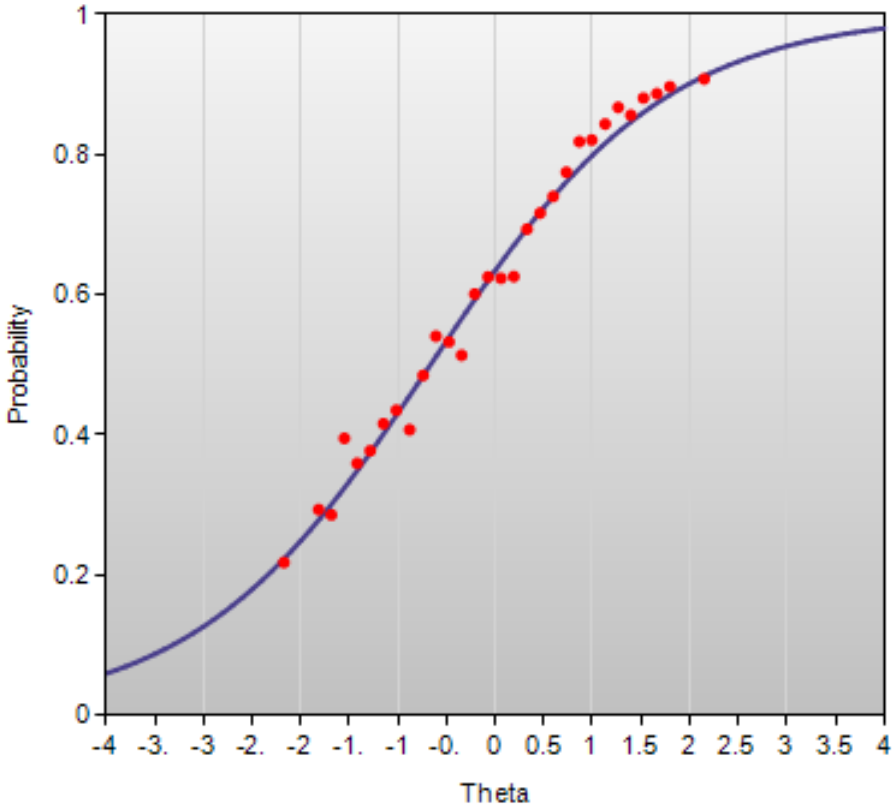

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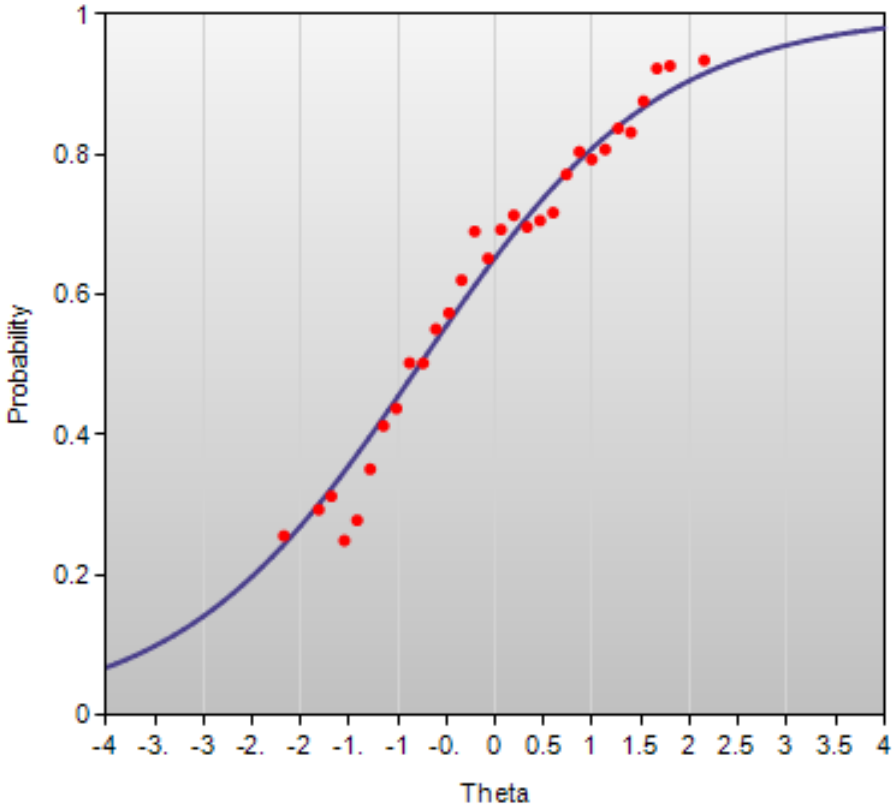

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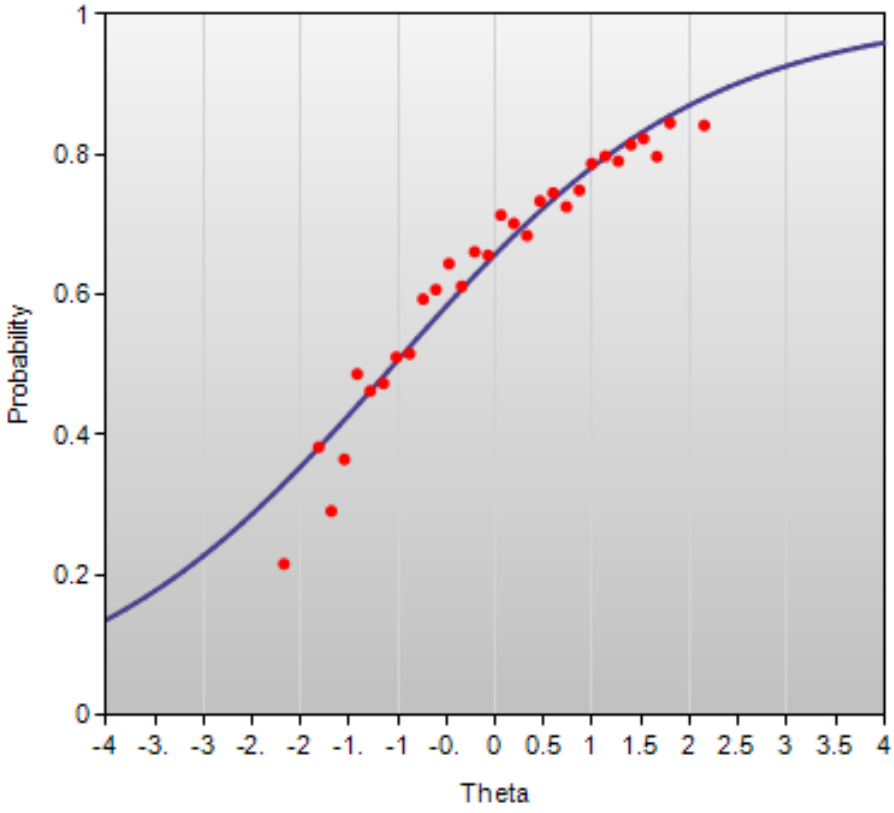

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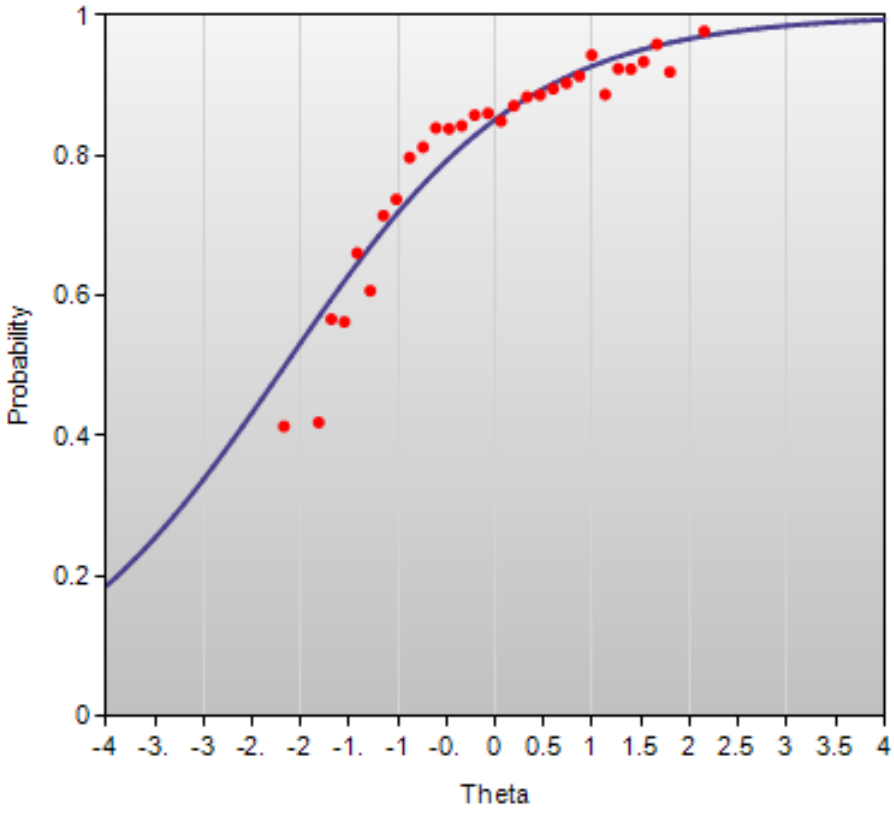

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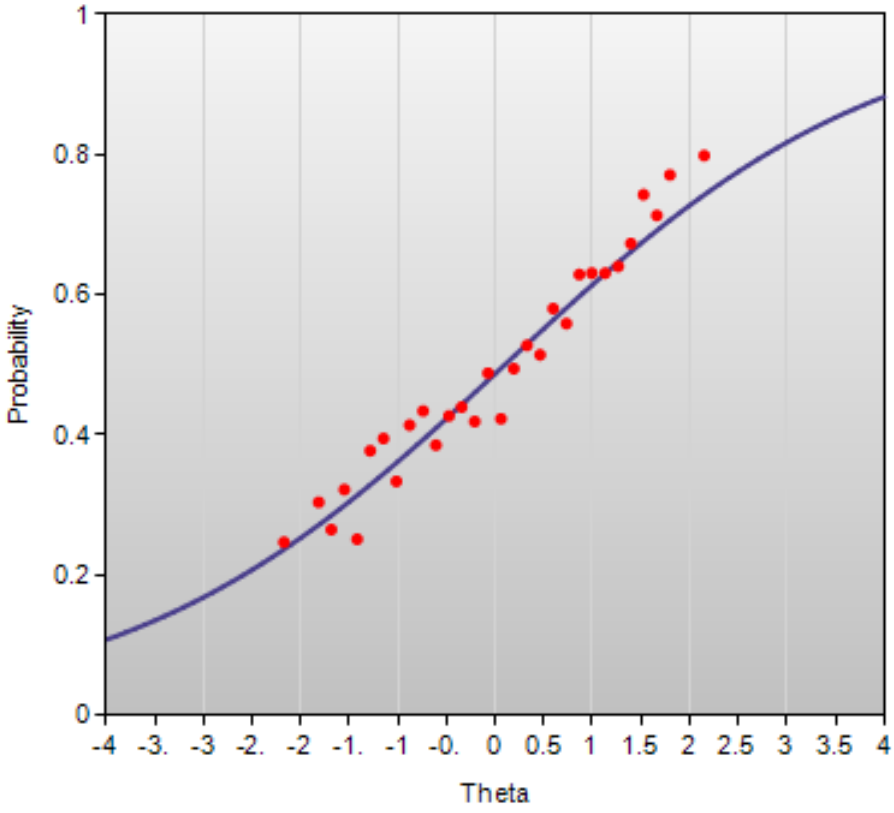

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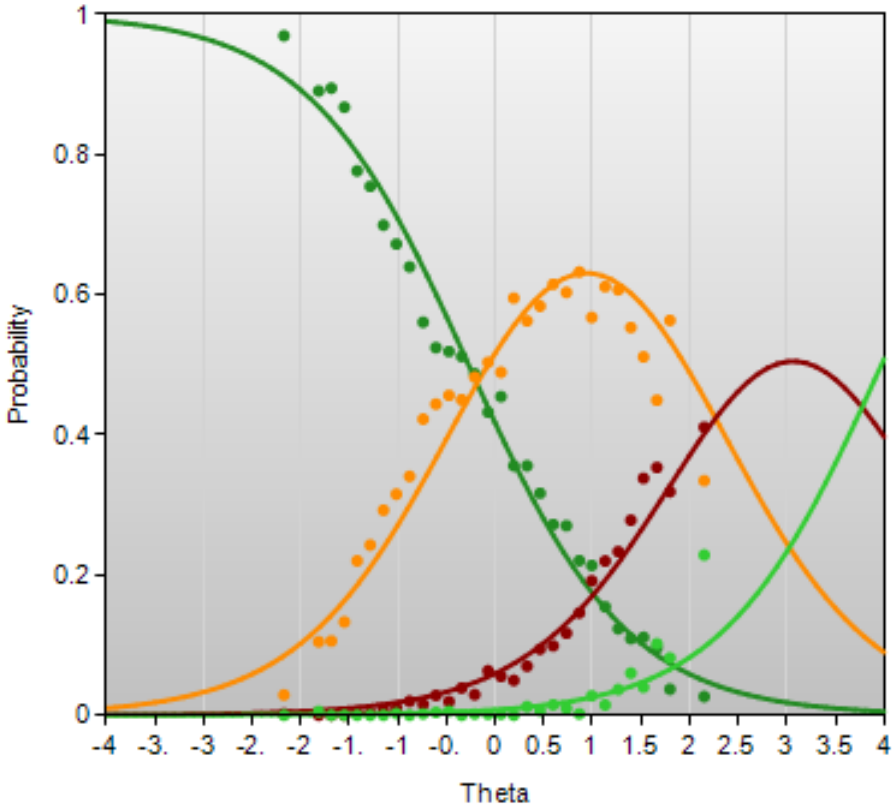

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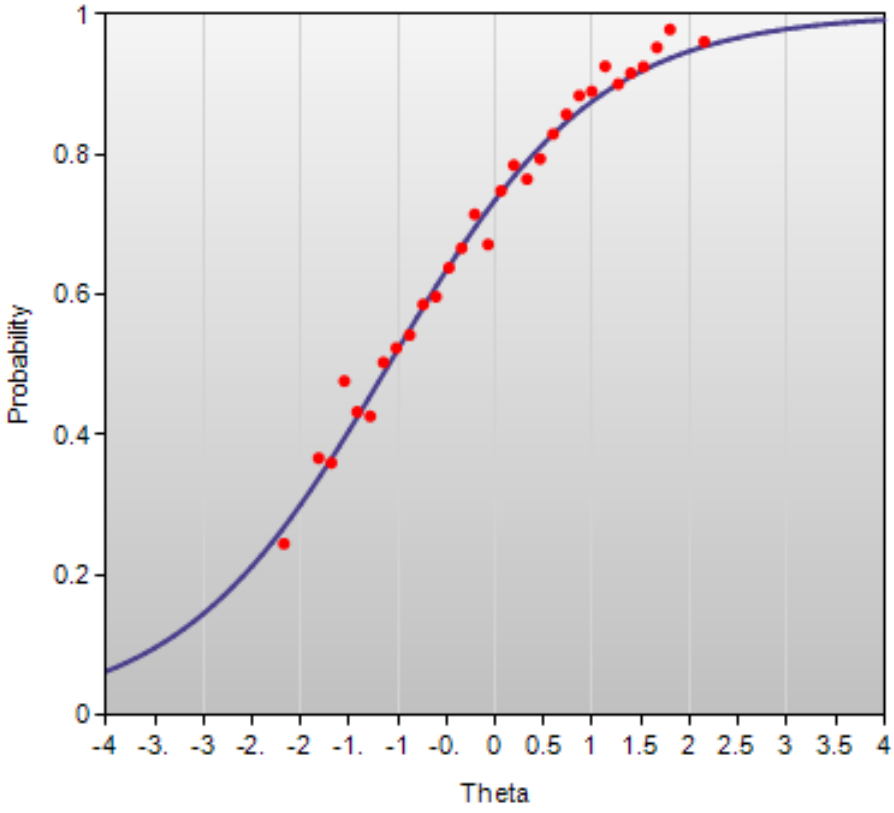

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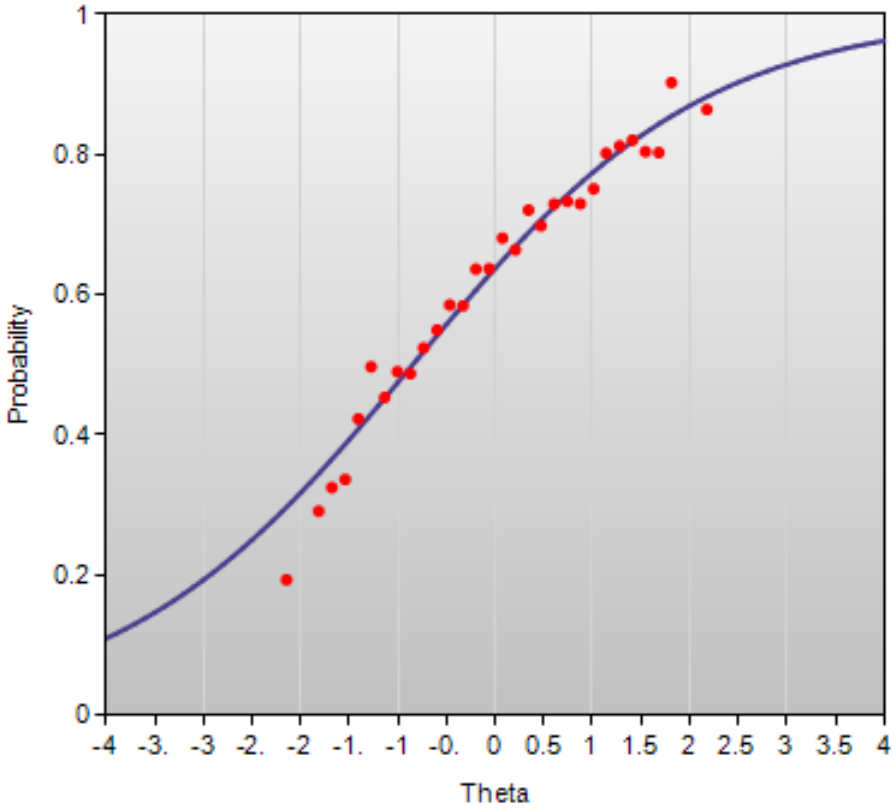

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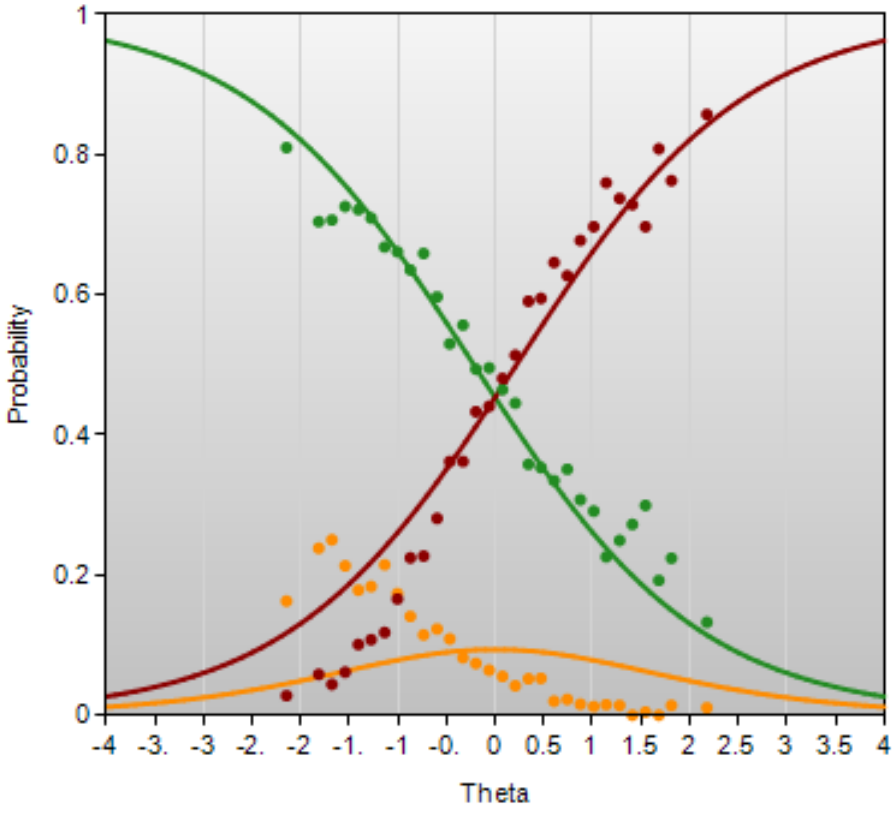

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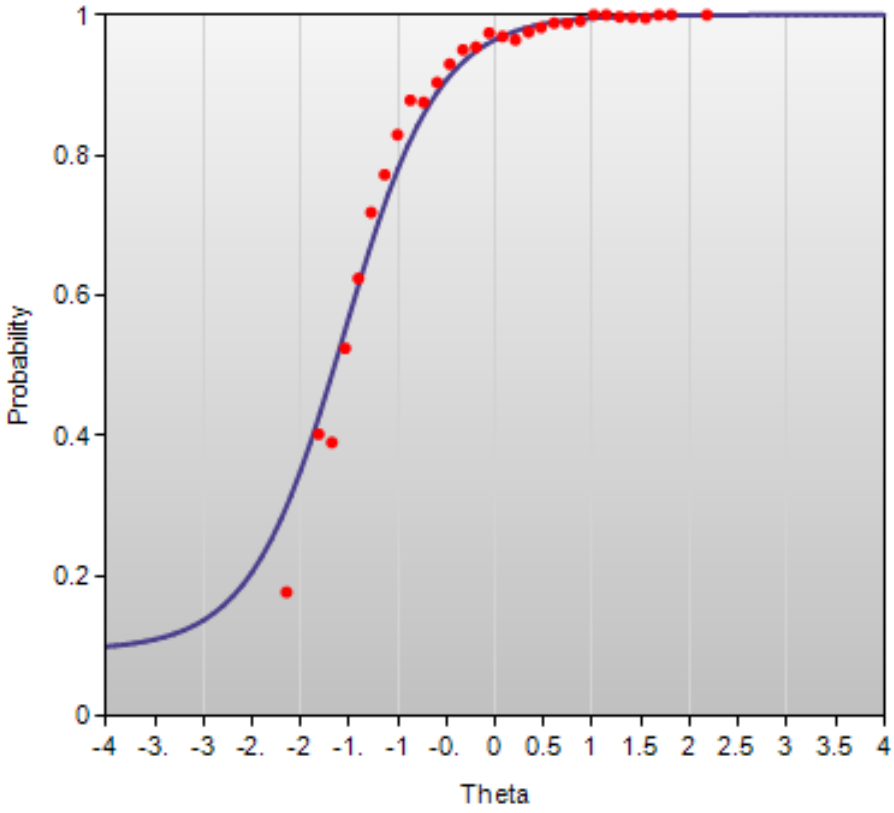
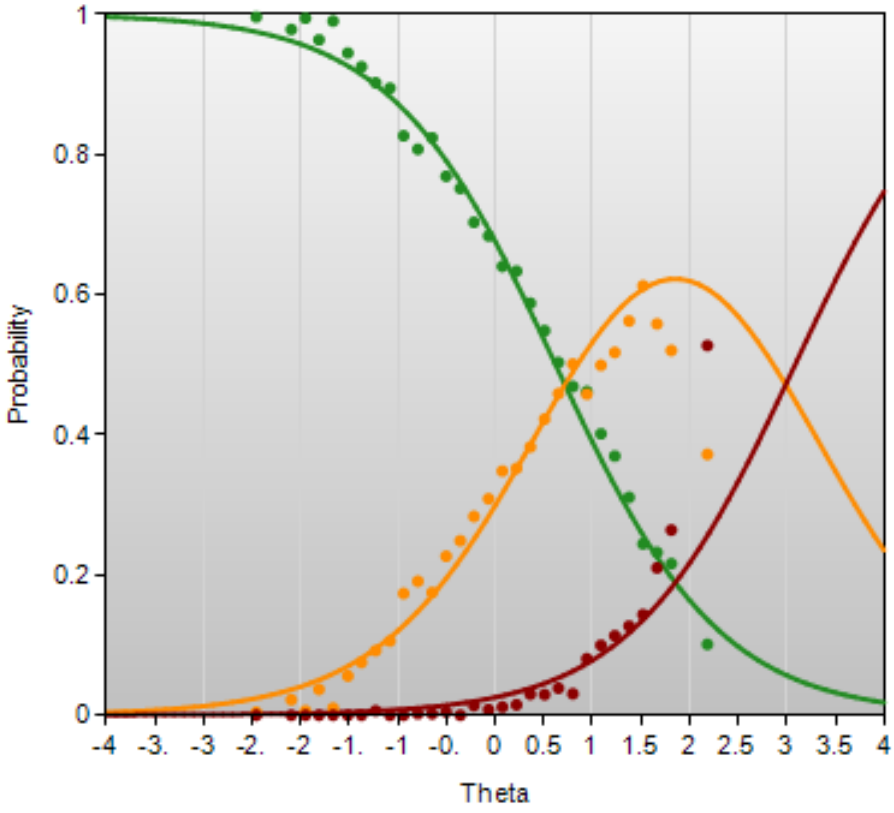


English Language Arts Grade 6: 130184A



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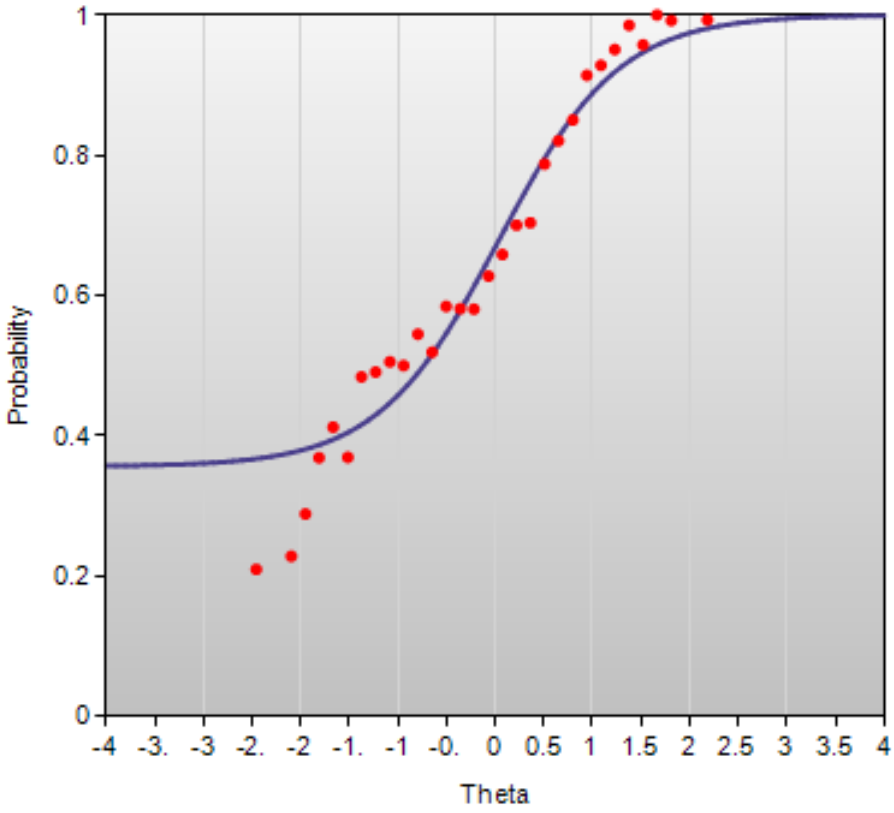

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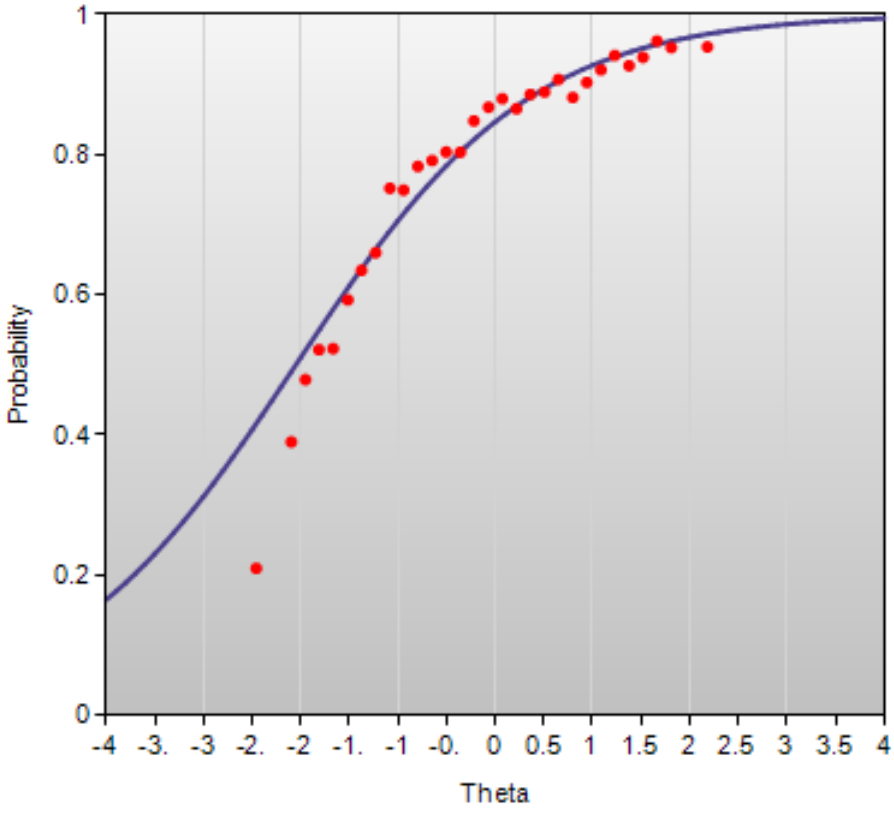

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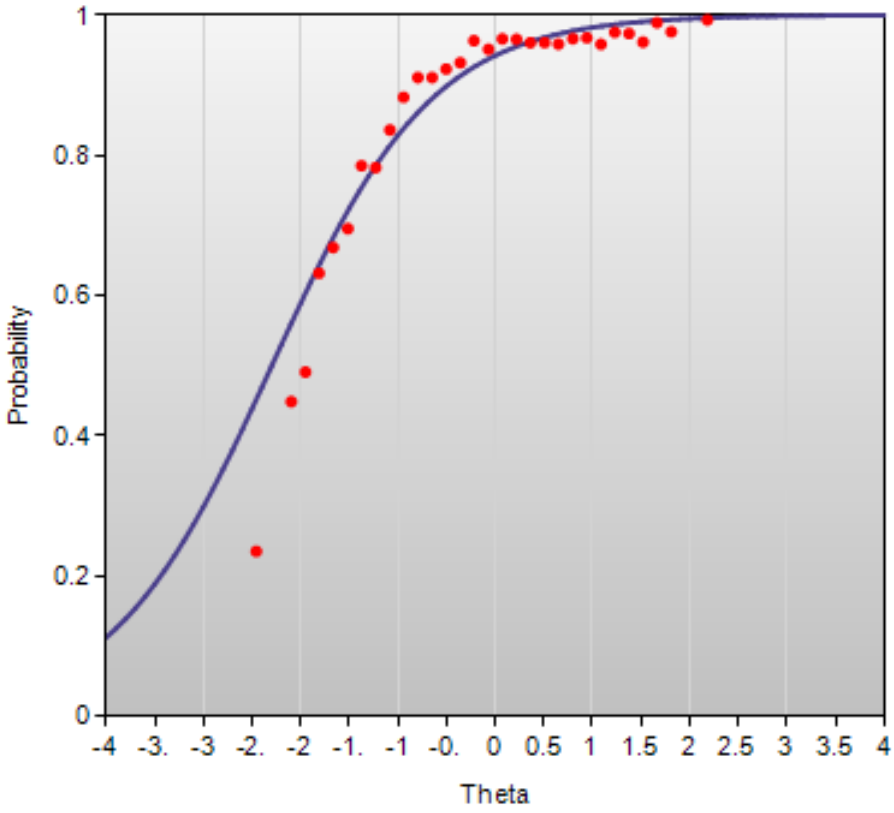

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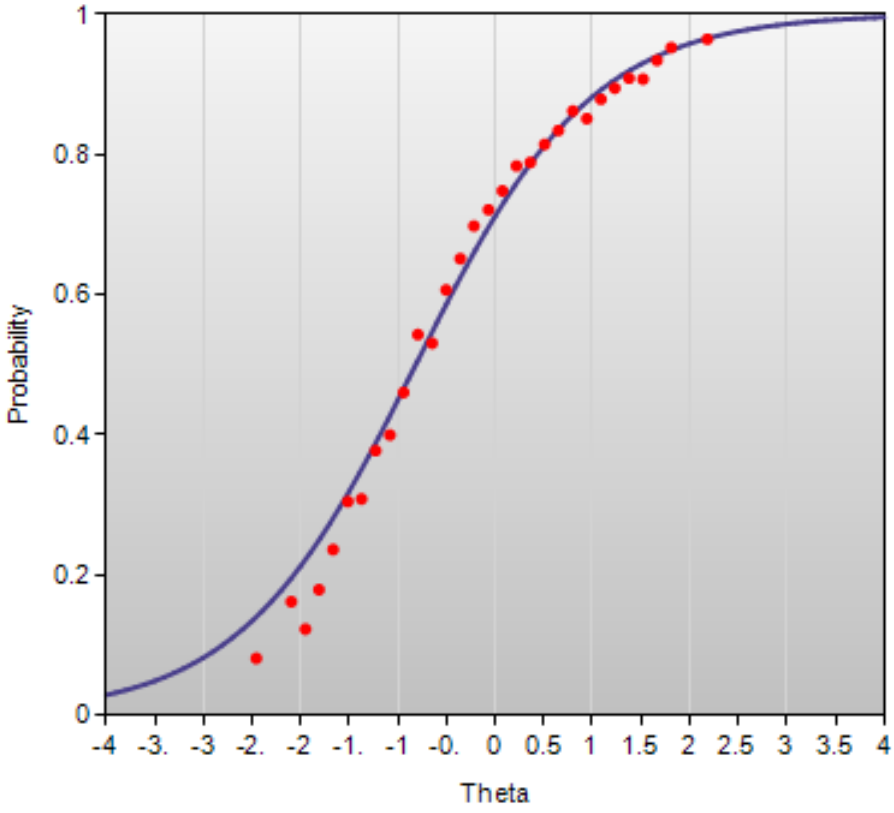

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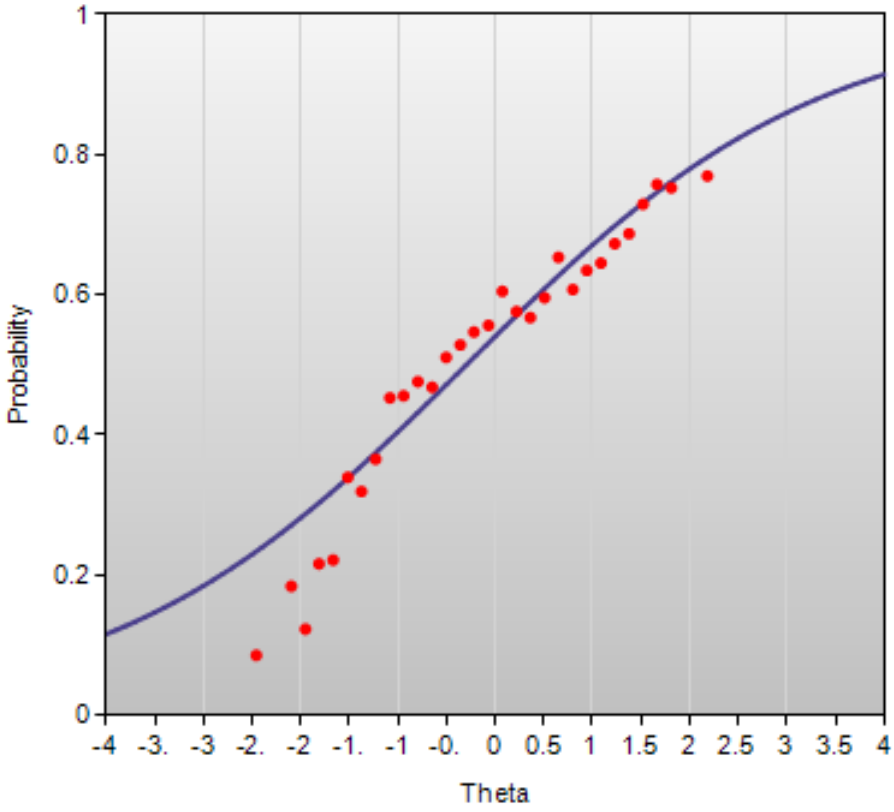

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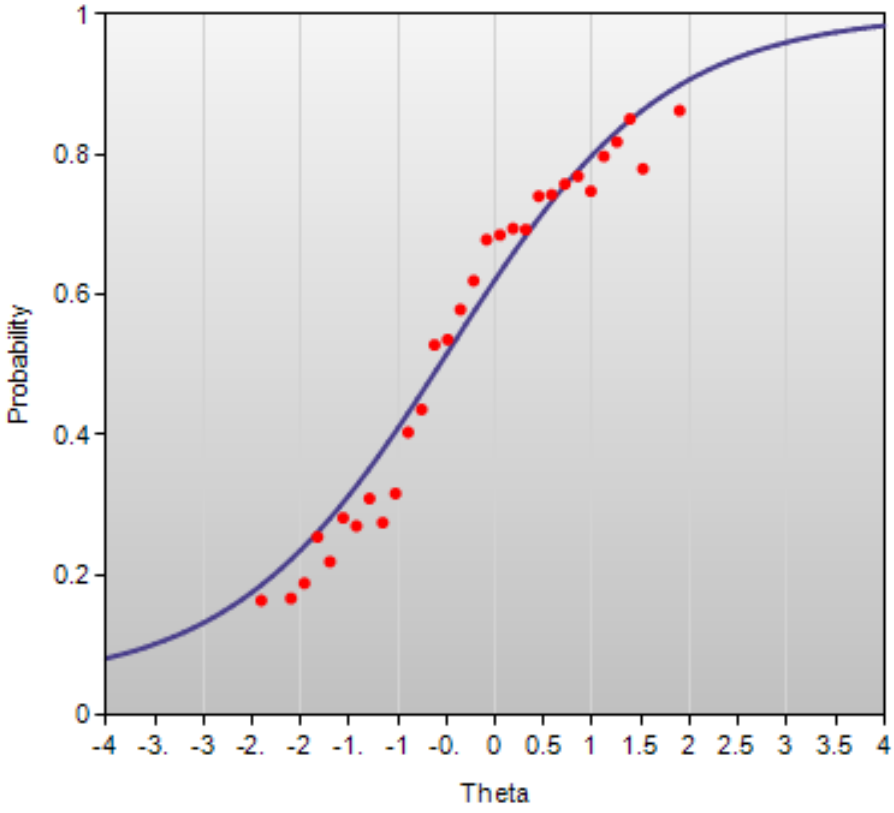

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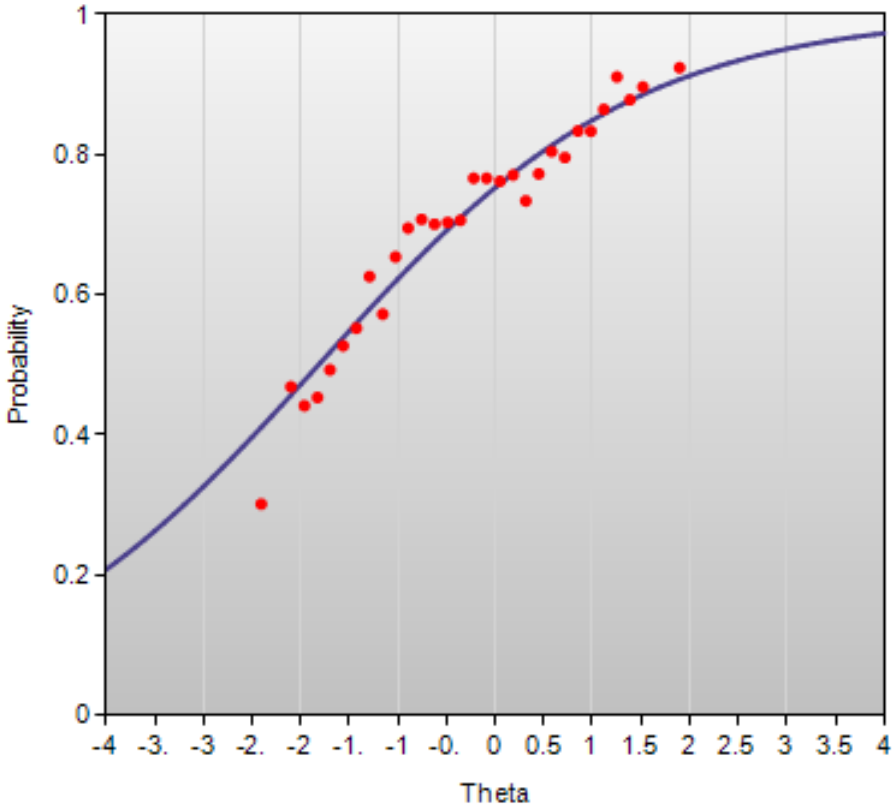

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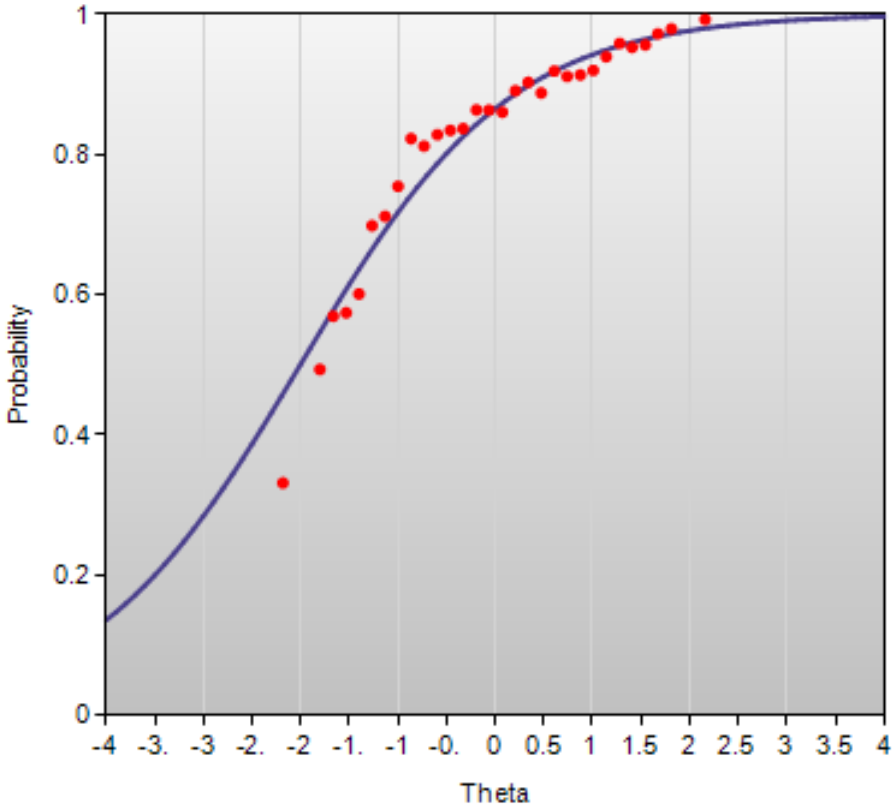

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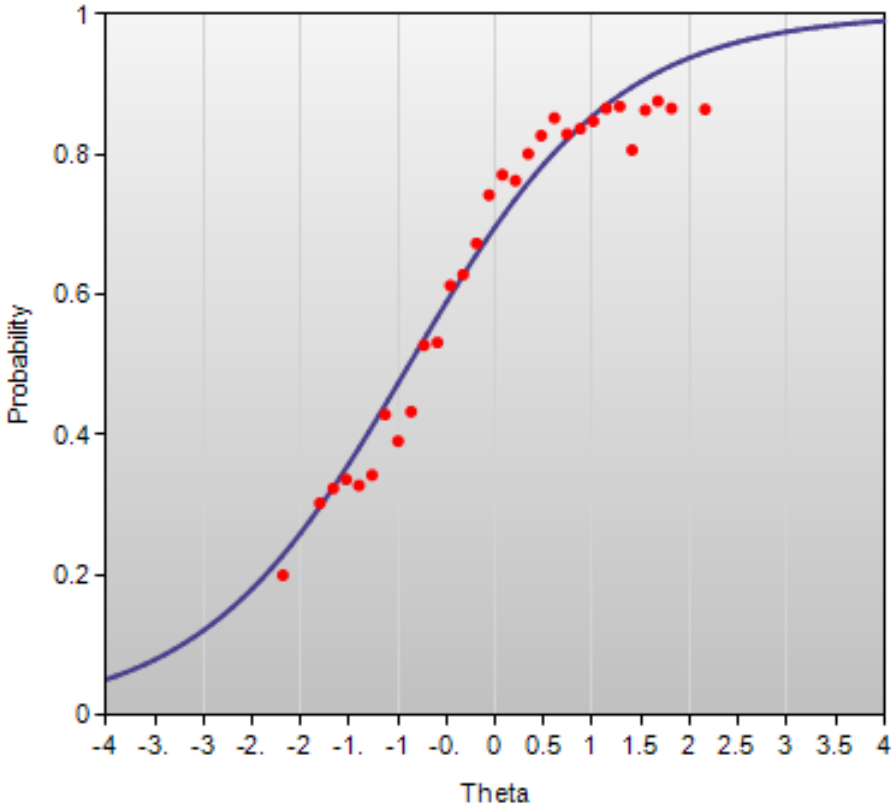

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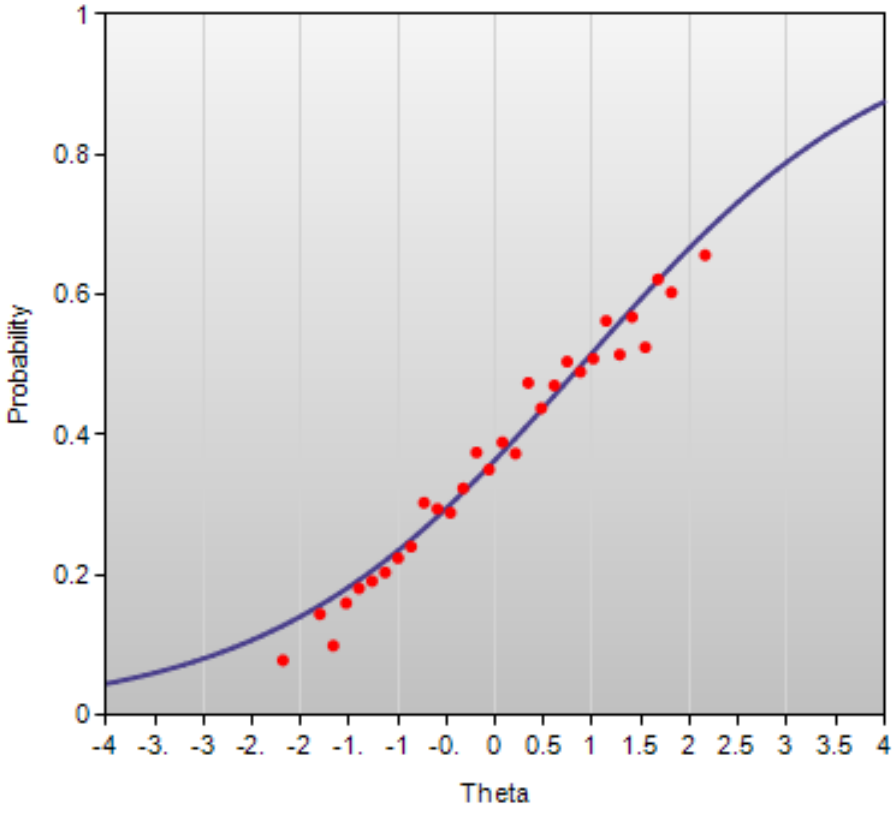

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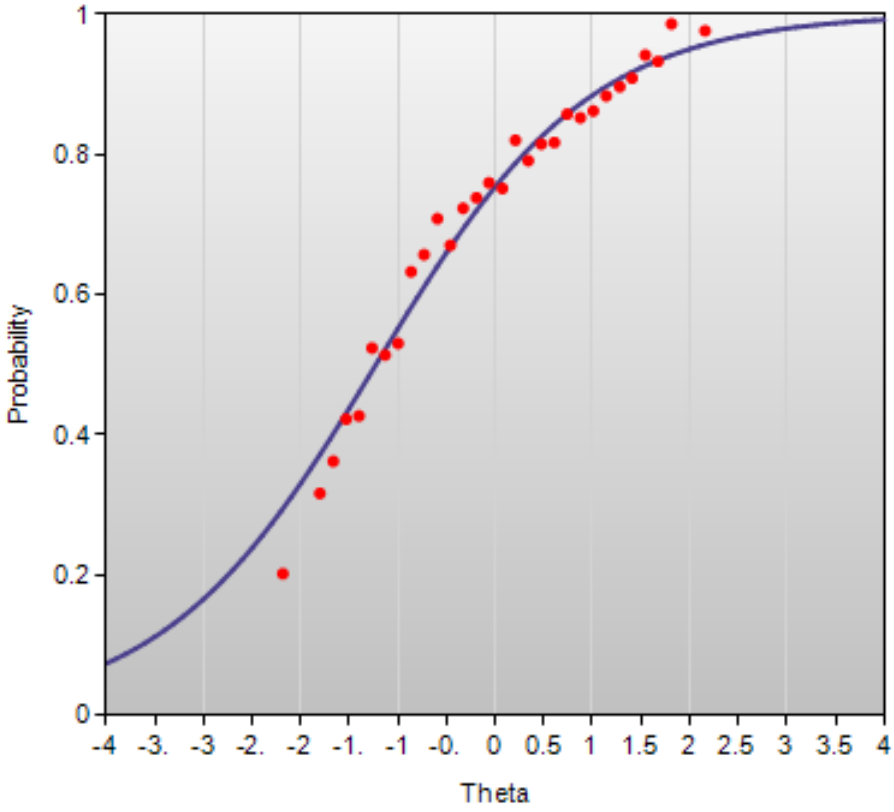

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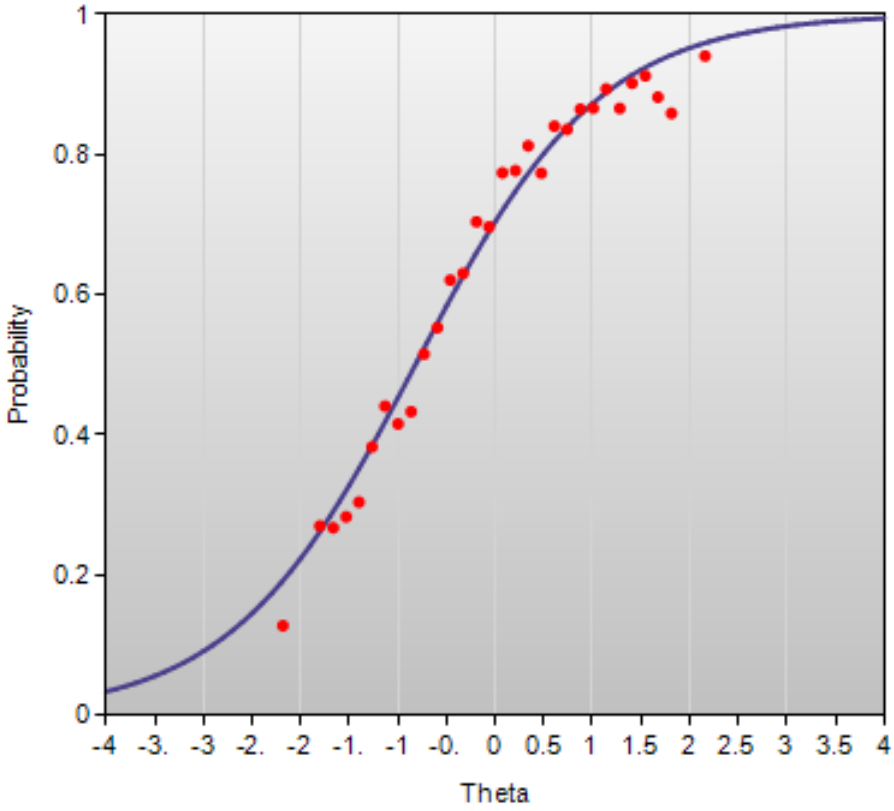

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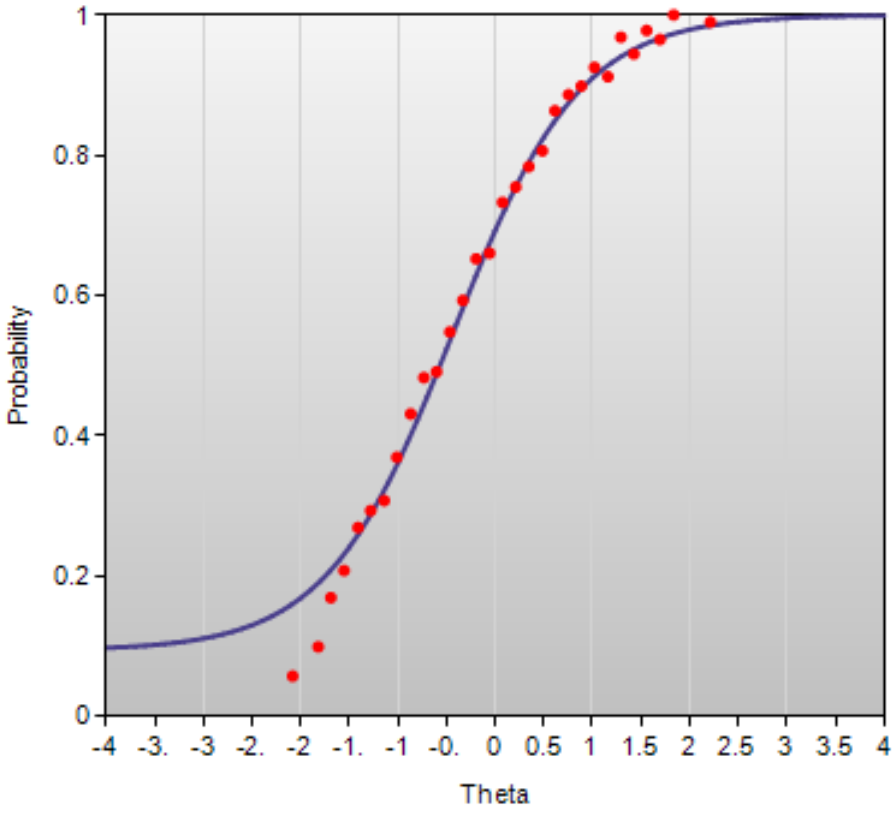

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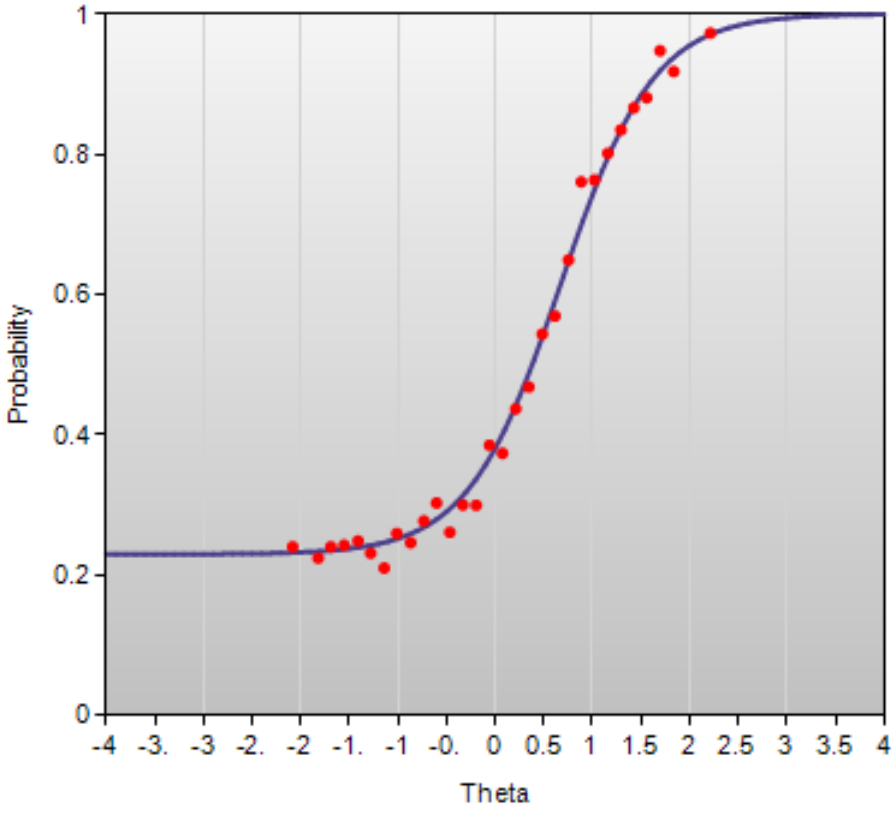

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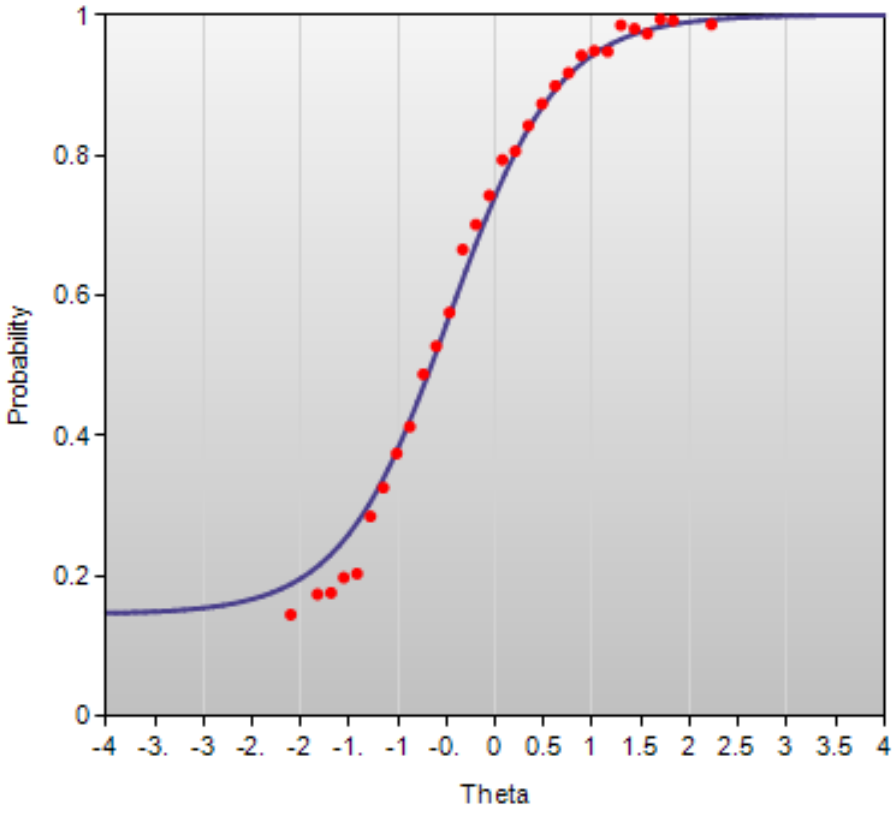

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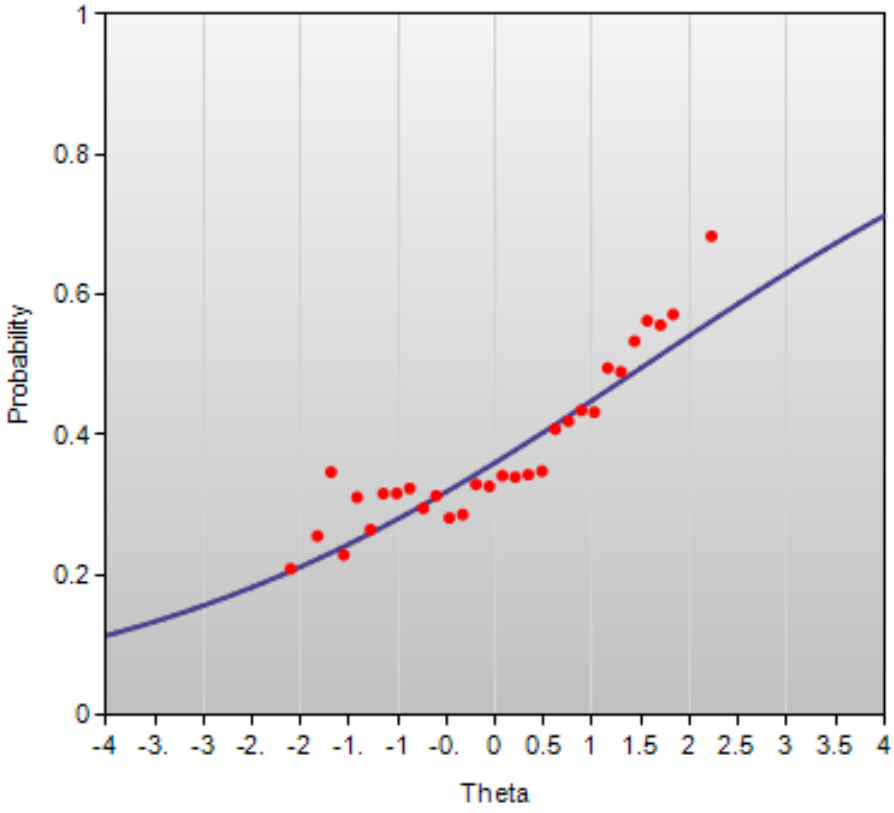

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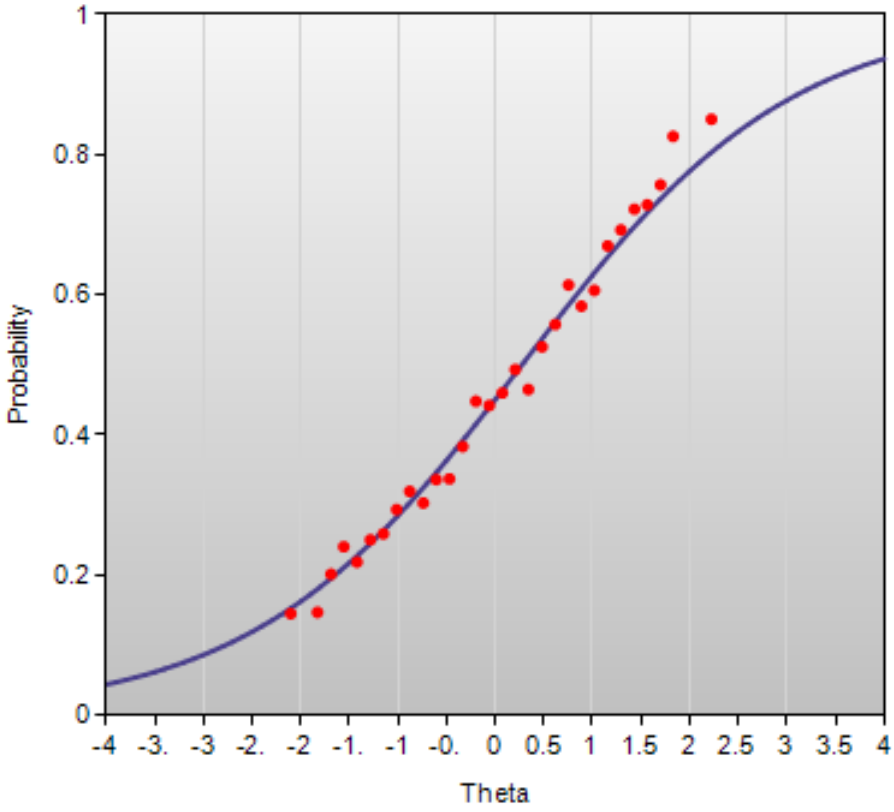

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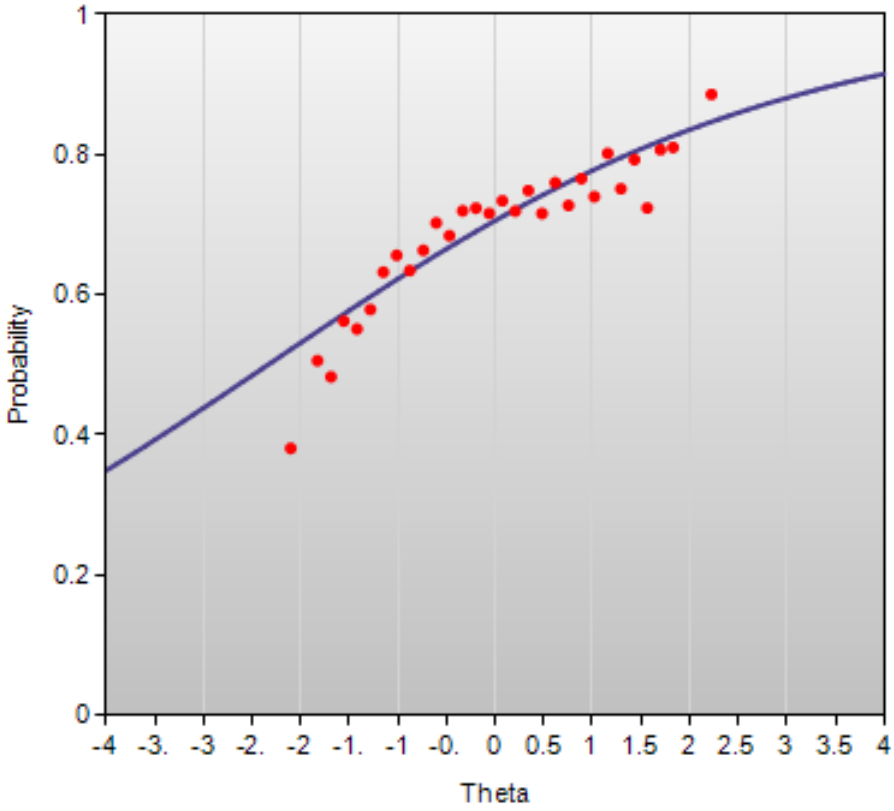

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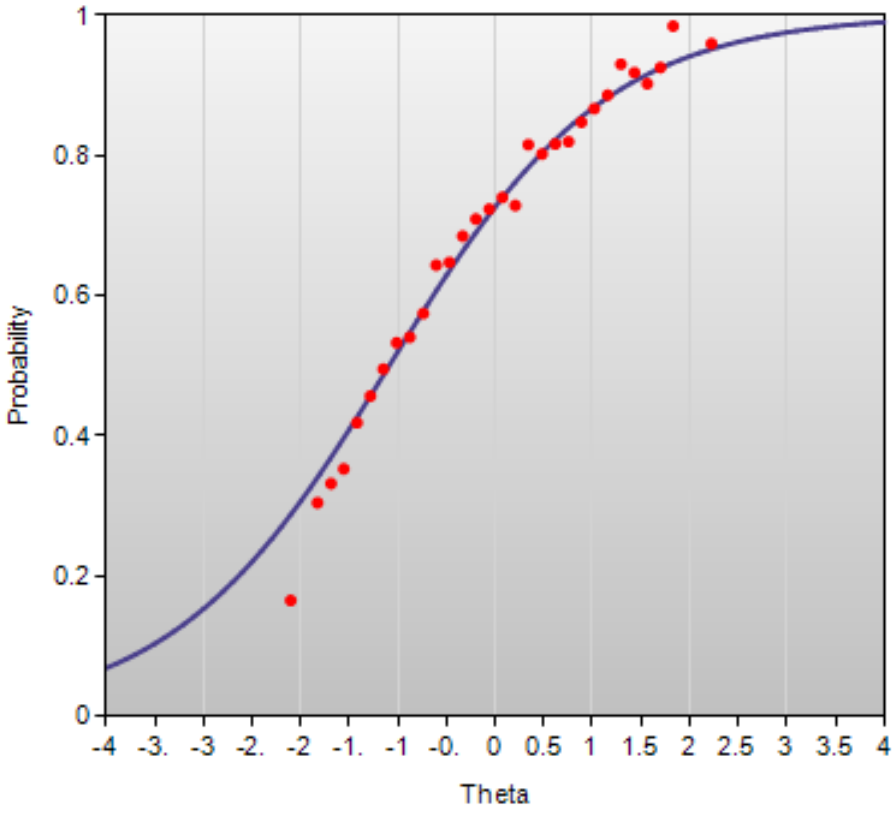

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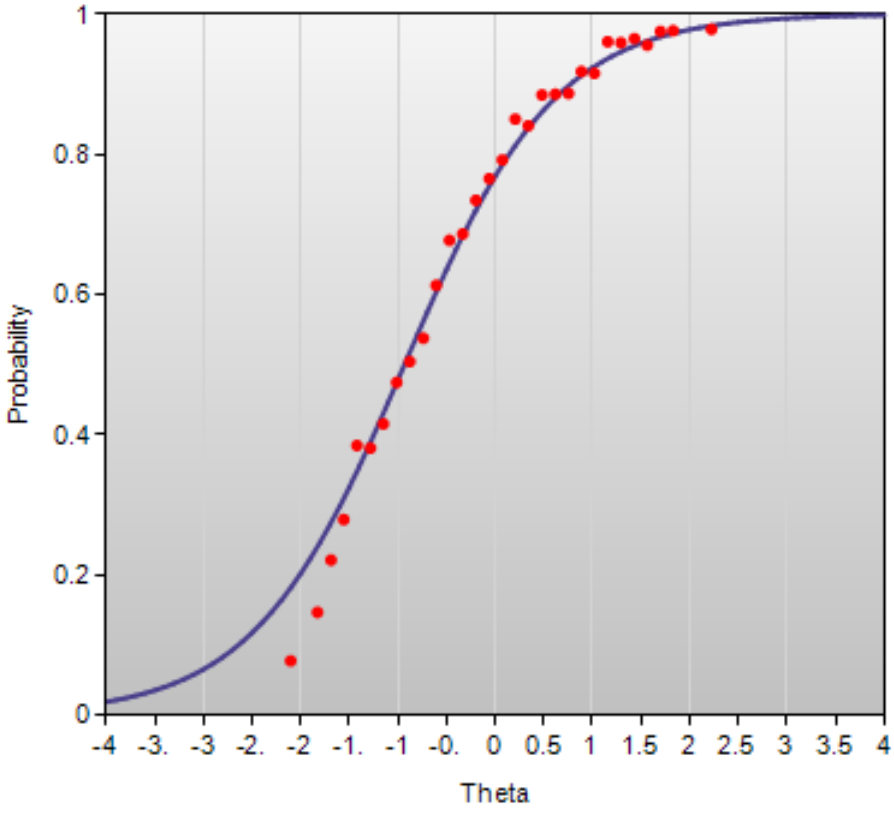

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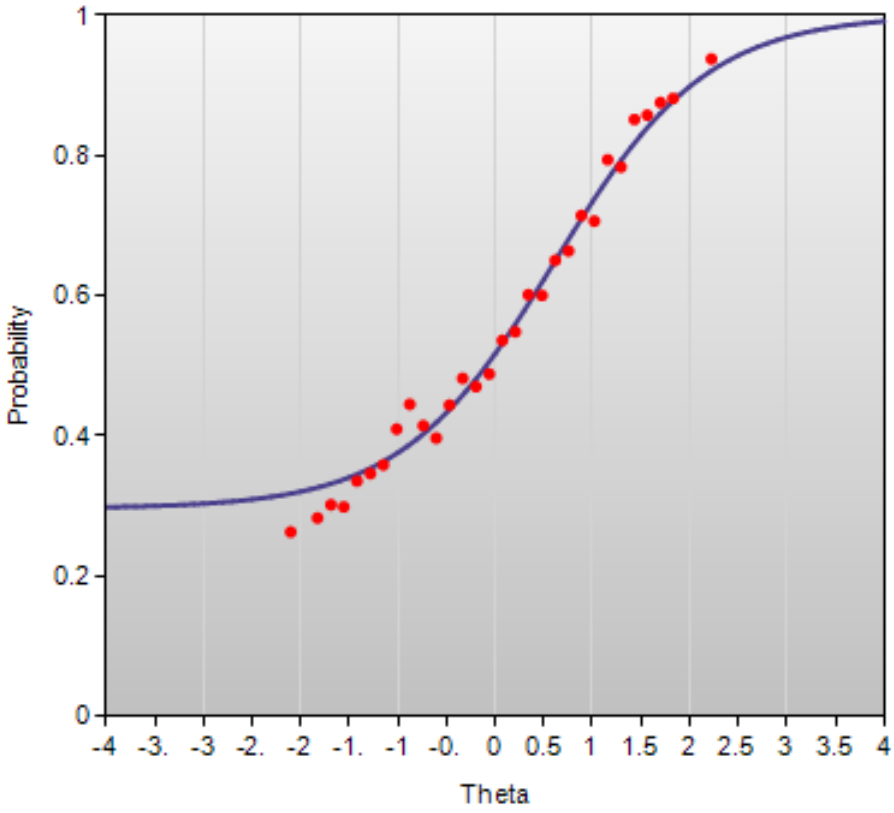

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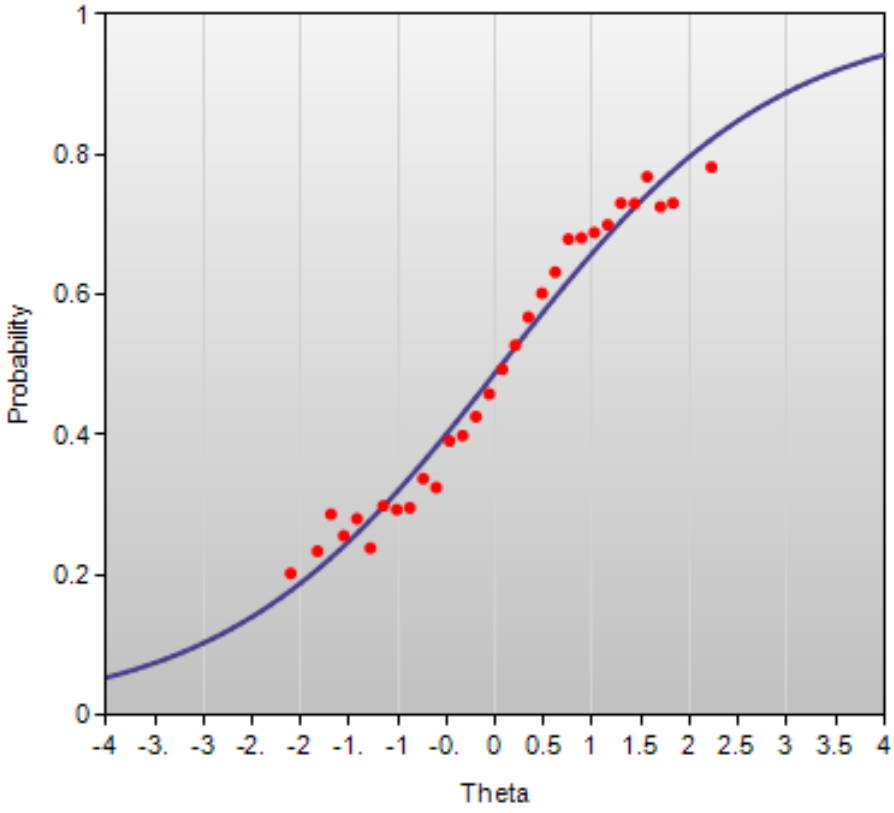

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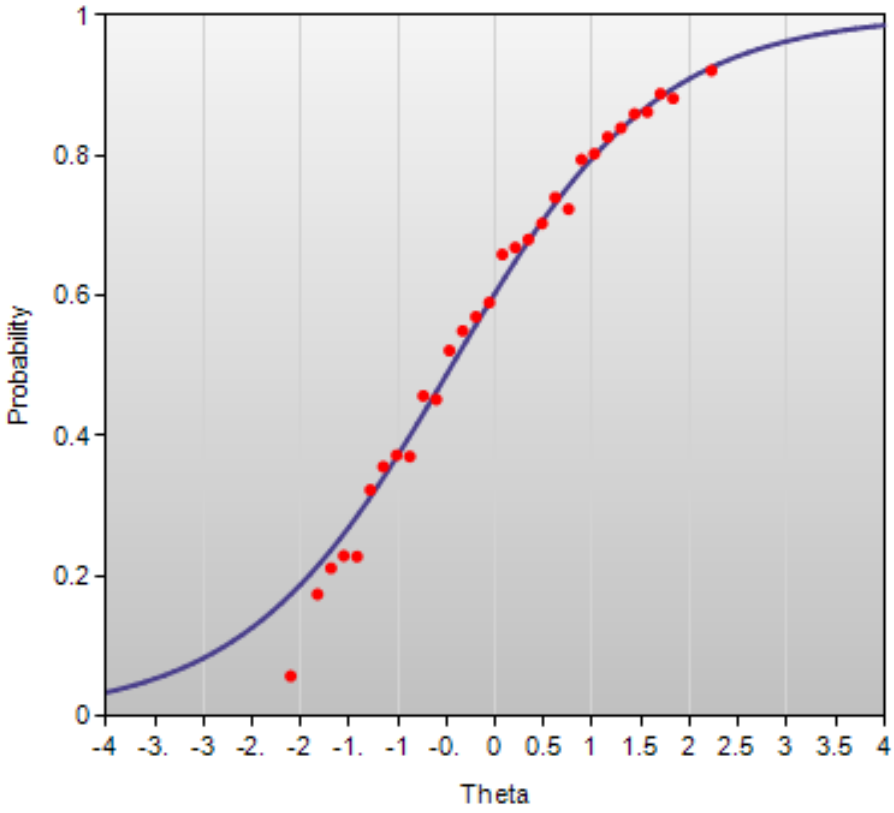

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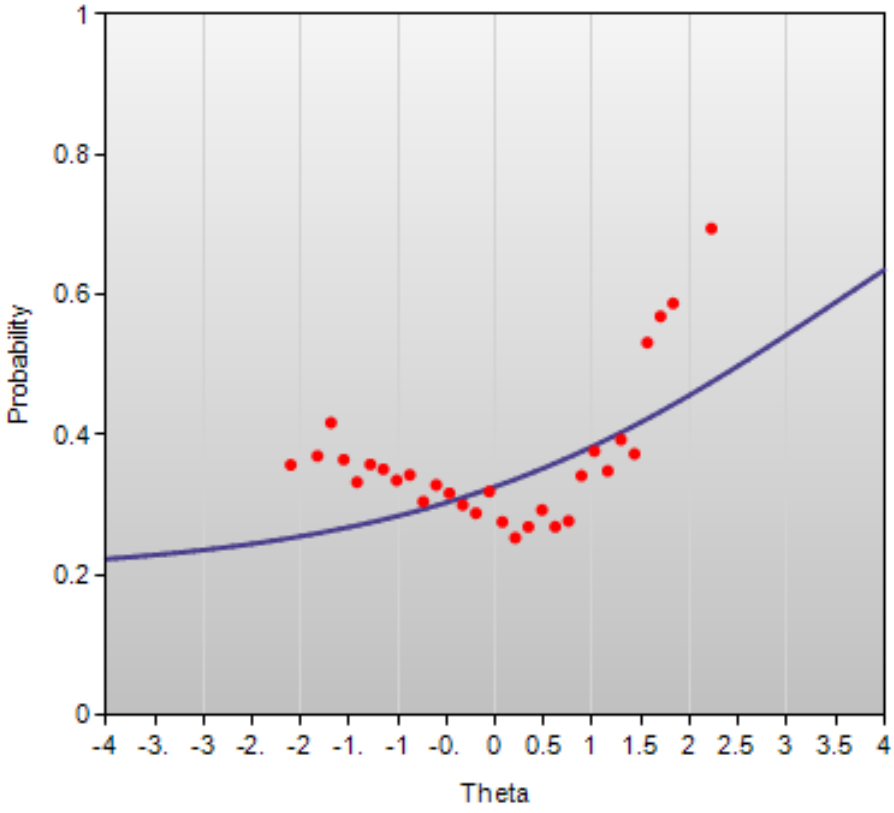

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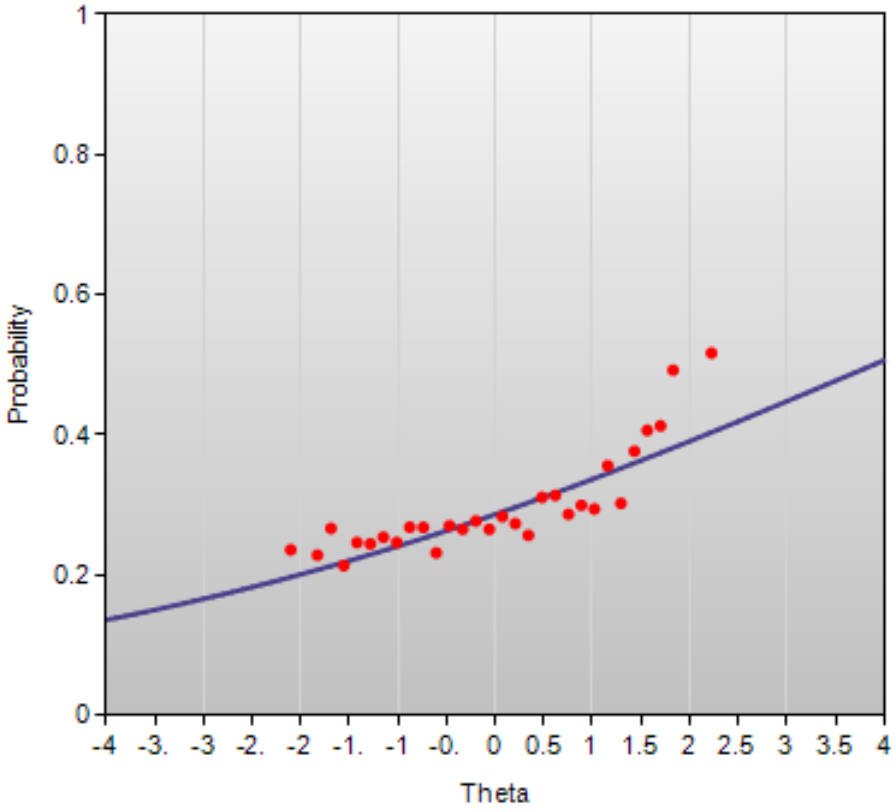

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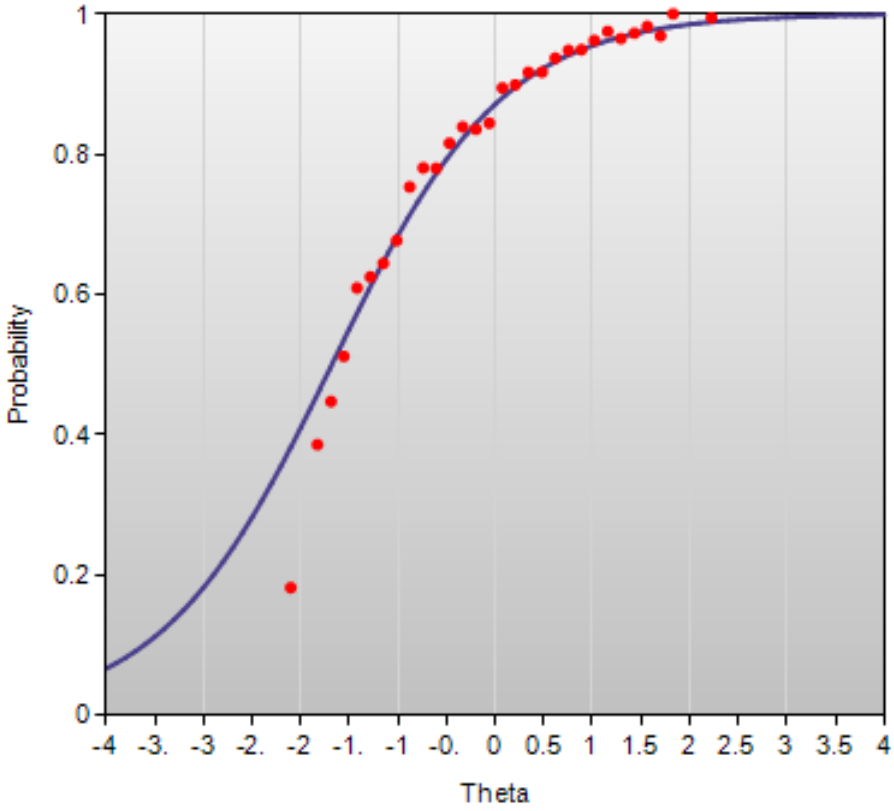

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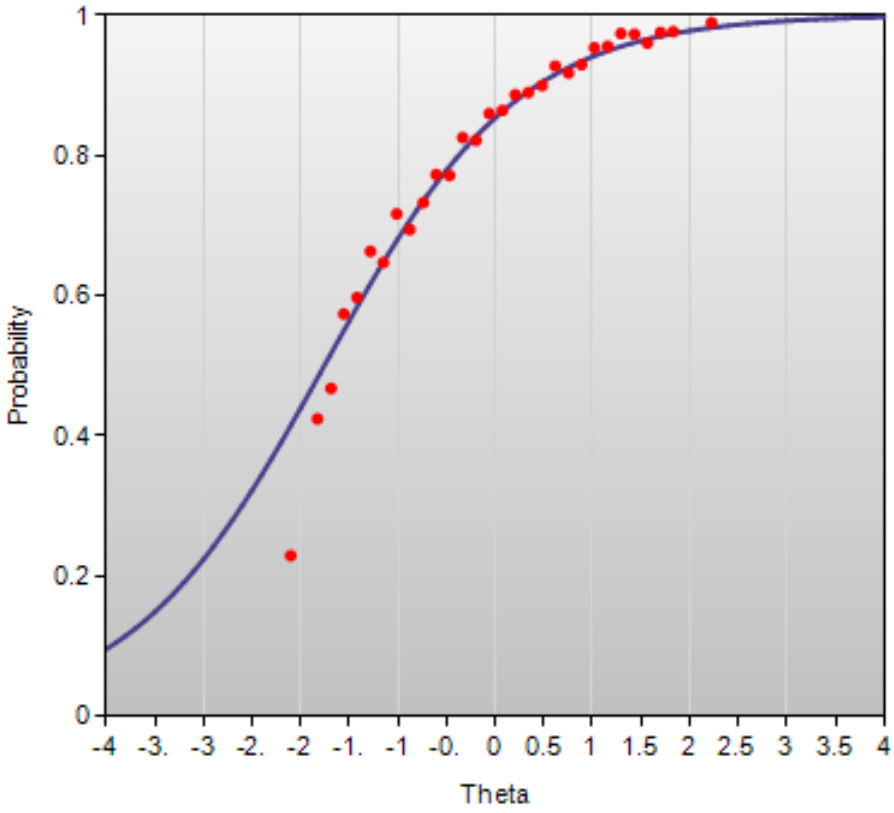

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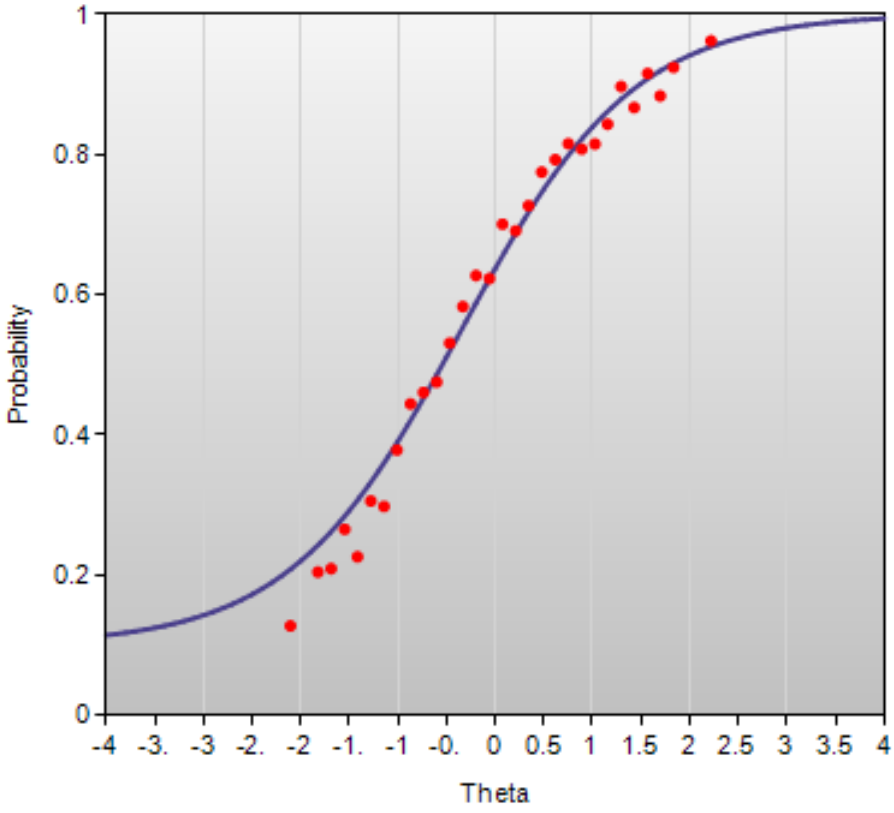

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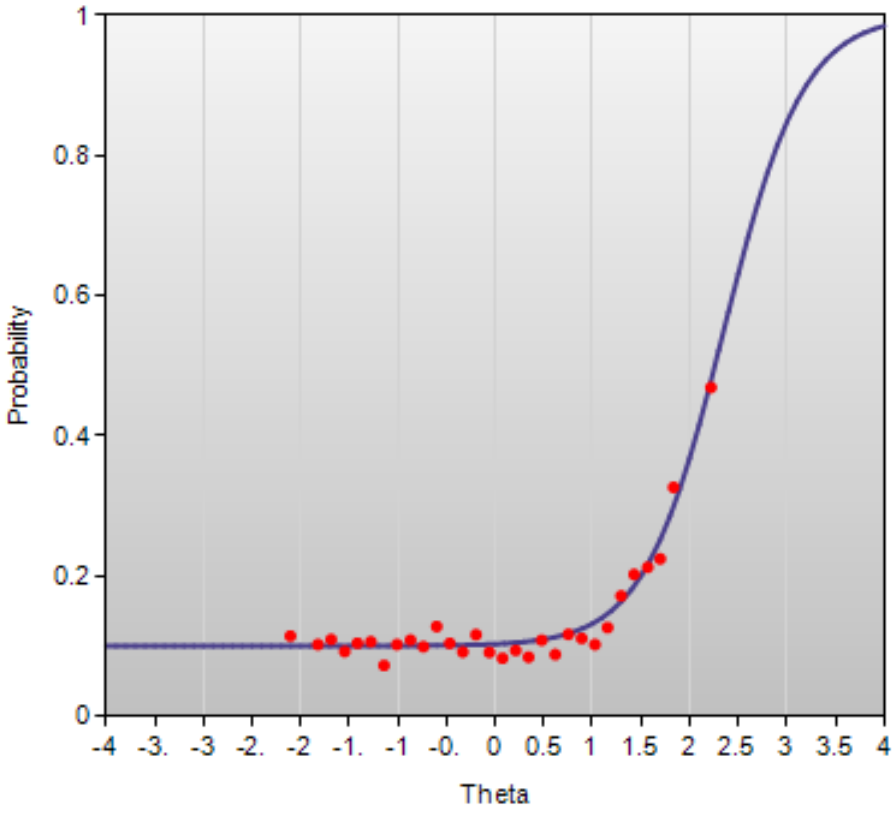

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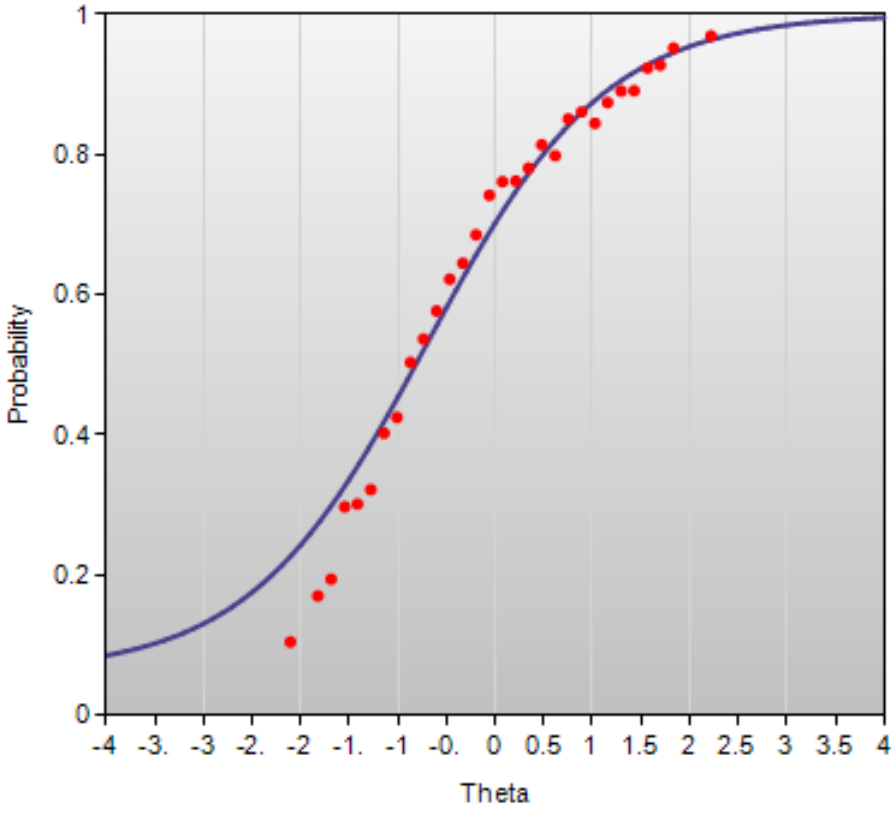

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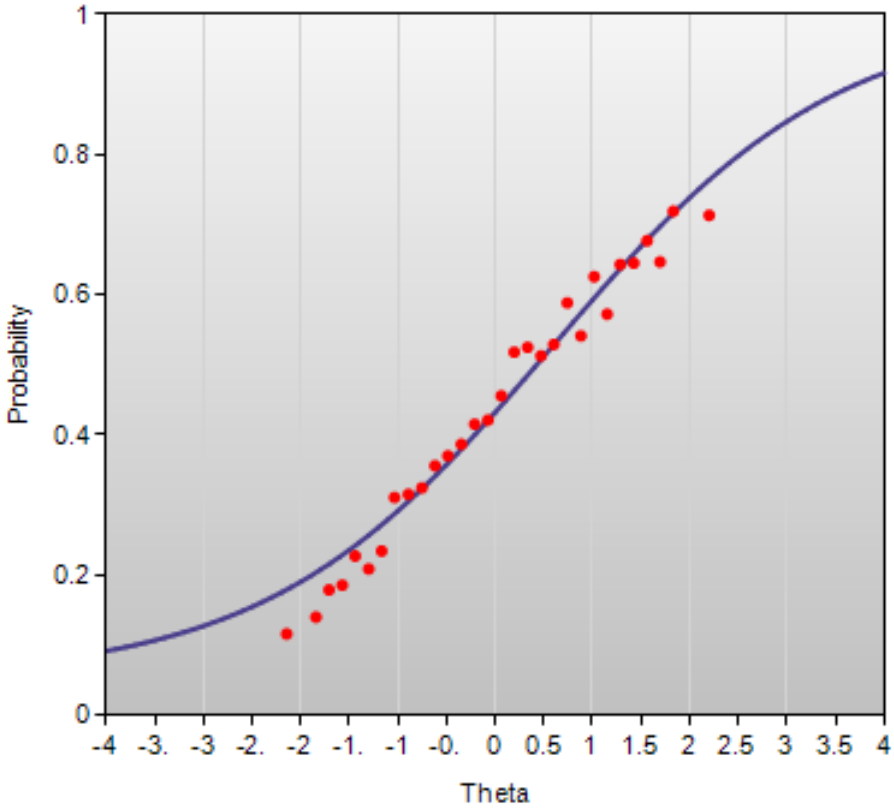

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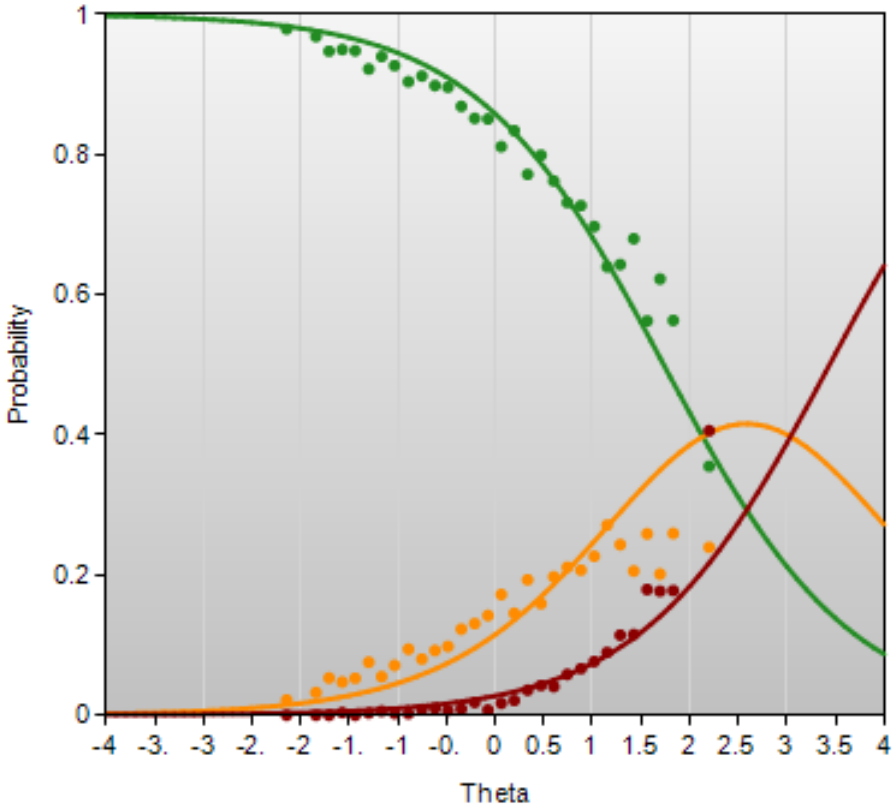

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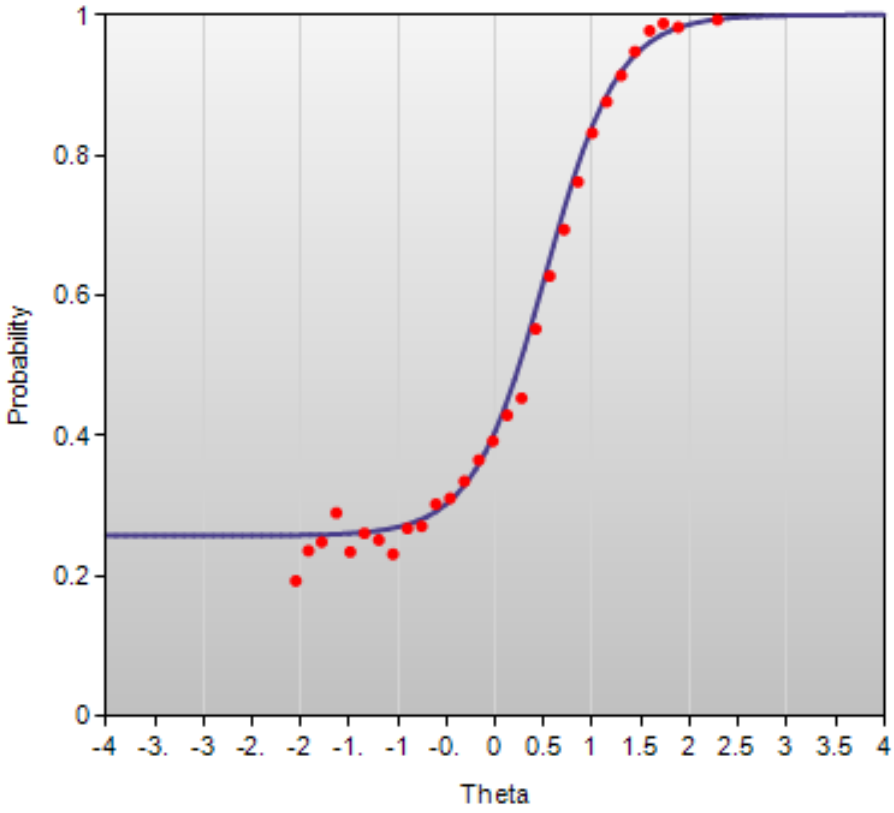

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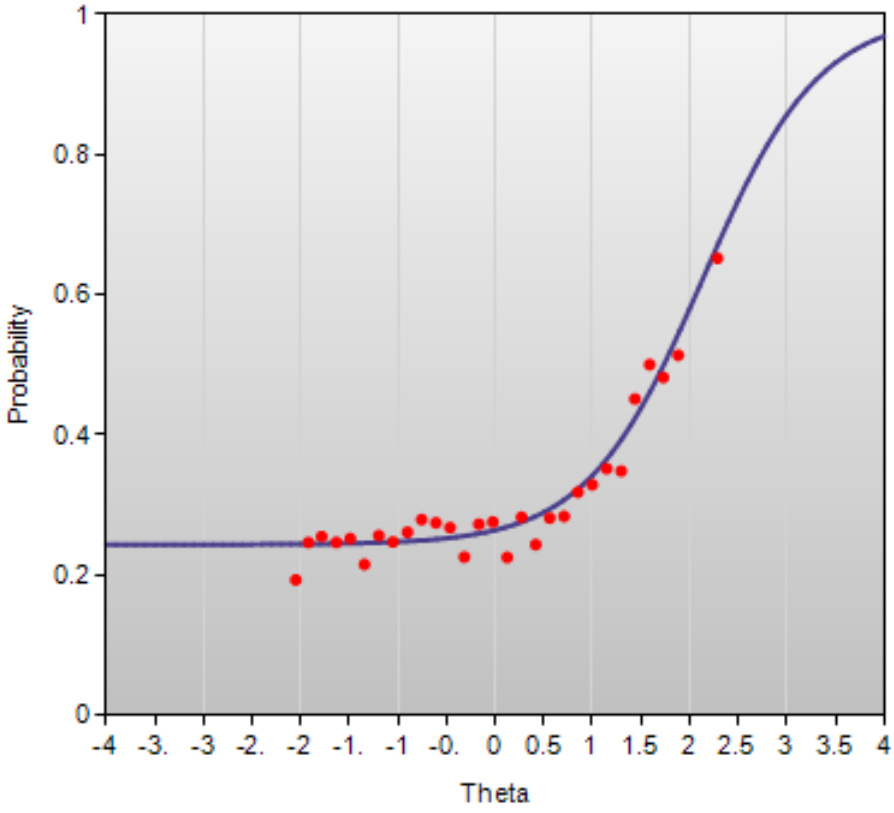

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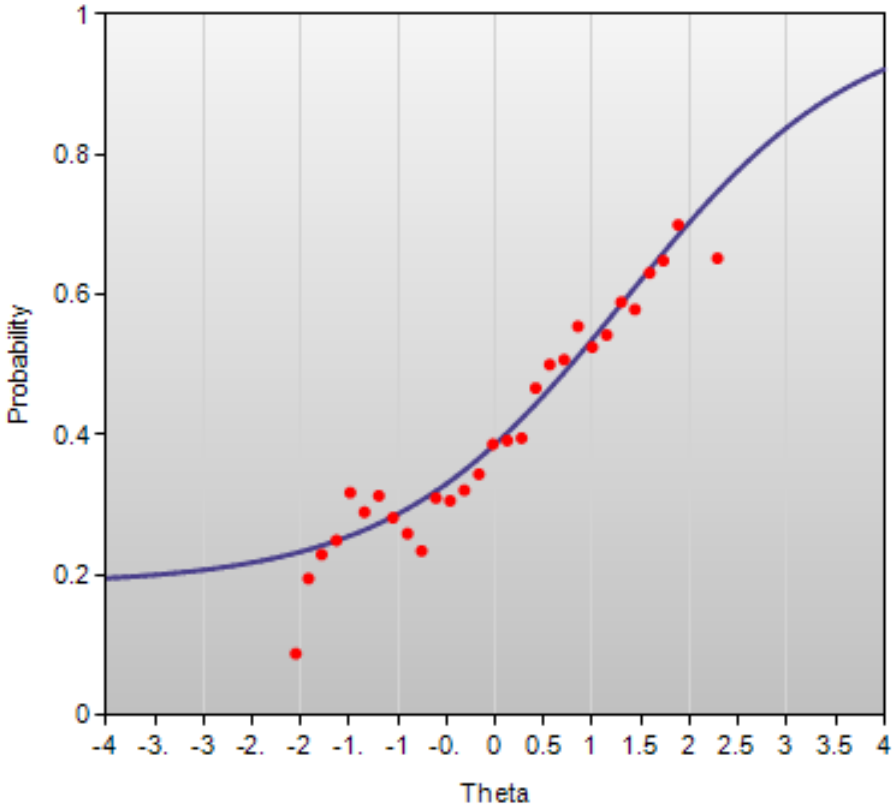

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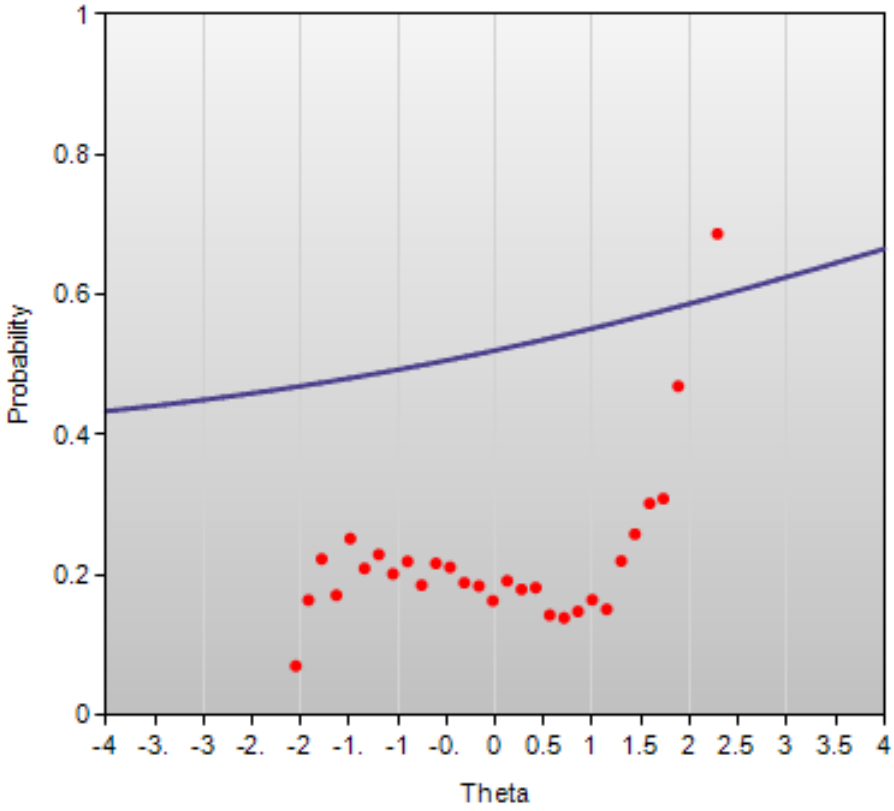
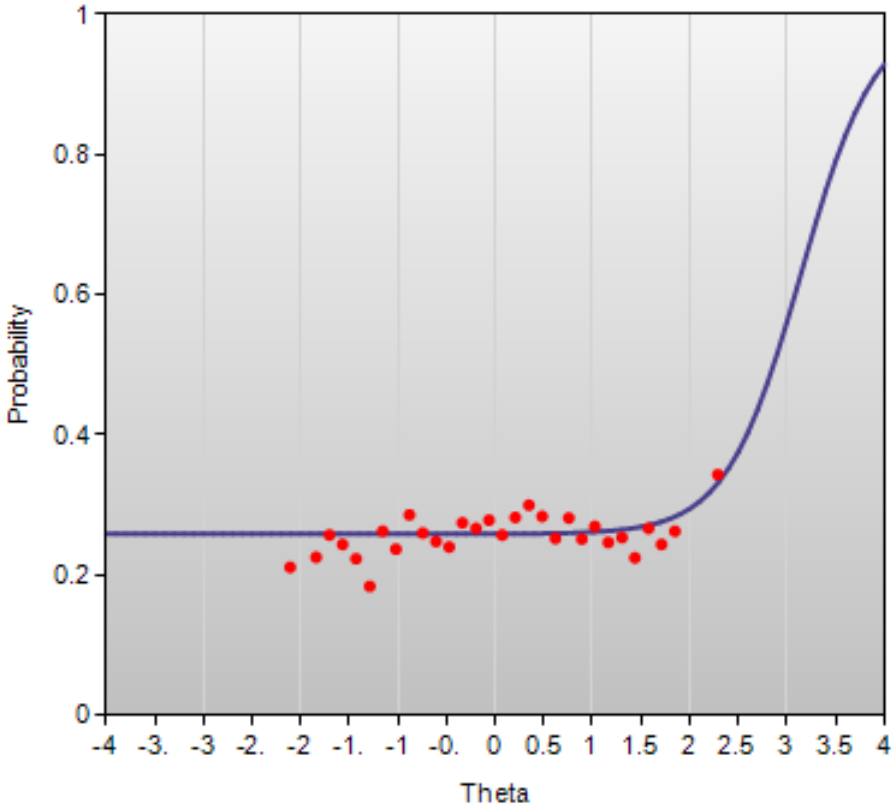
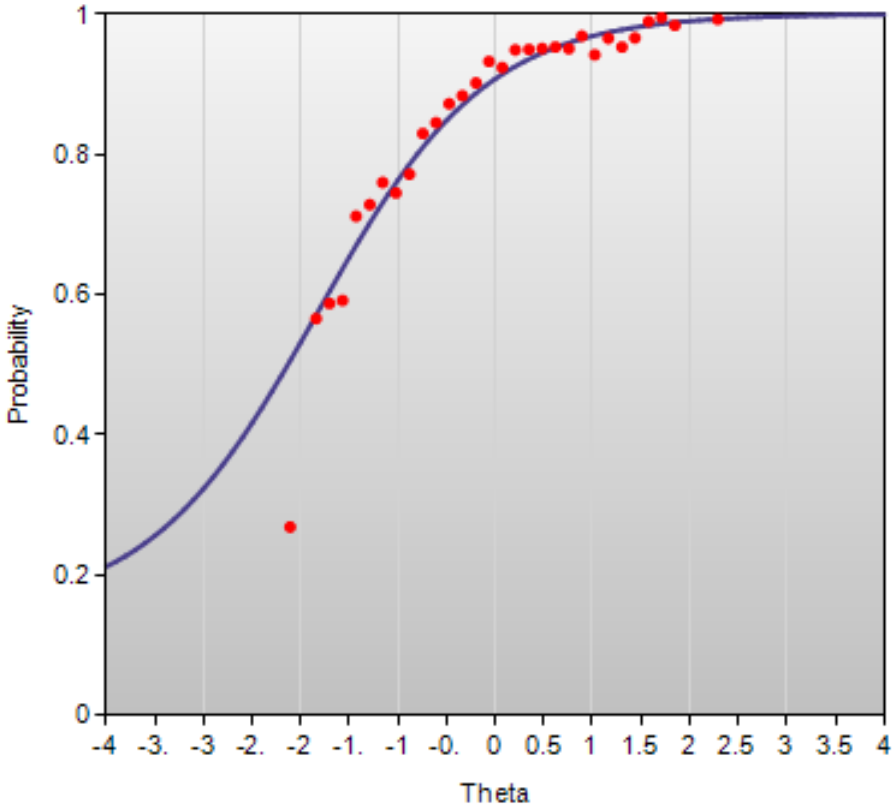
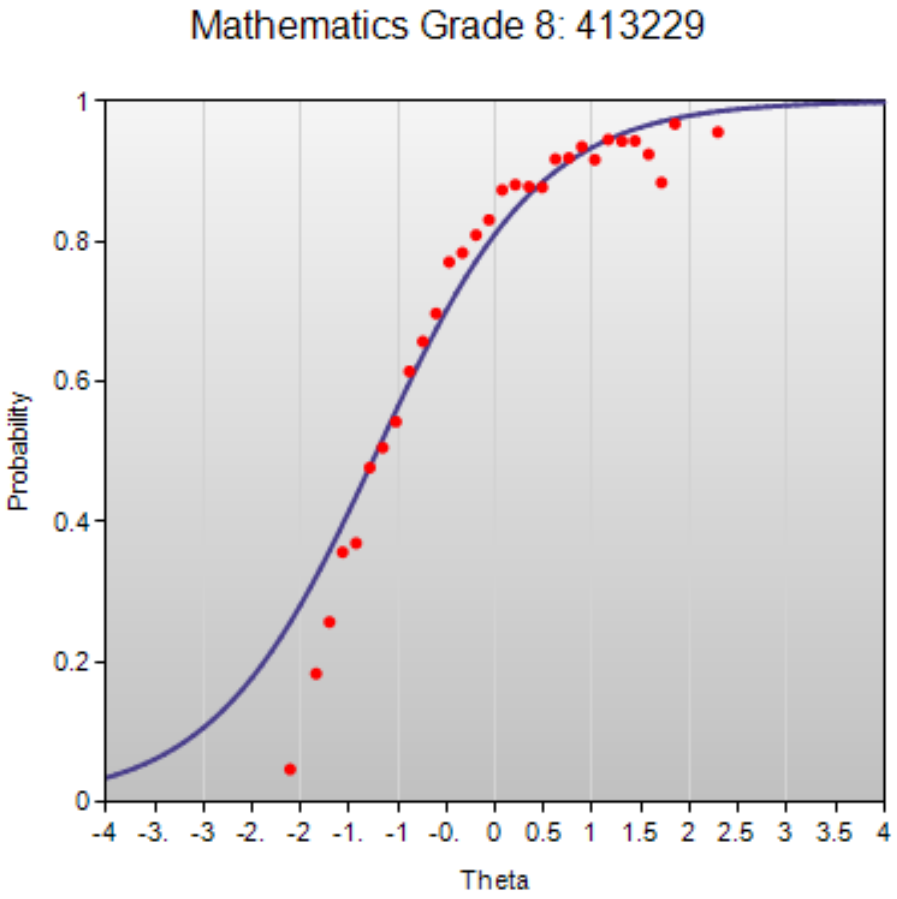


Mathematics Grade 8: 409018



Mathematics Grade 8: 413063




Mathematics Grade 8: 413229
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0.4
0.2
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Theta